

# Antiquity

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## Education and the Study of Man

by GRAHAME CLARK

EDUCATION as a subject for post-war planning is on everyone's lips today. Public interest has never been higher. Yet it may be doubted whether even now the full measure of its importance is realized. Next to winning the war, nothing is of greater moment than the battle for enlightenment, for if this is lost the 'victory' will be vain and we may all prepare for an ordeal more terrible than the present, because fought out among still larger aggregations of political and military power. The whole of history bears witness to the corruption of power, the struggles of the few for spoil of the many, the ignorance of the peoples and its lethal consequences to themselves. Today, thanks for the most part to the heroism of the common man, whether citizen of a bombed city, defender of Stalingrad, peasant of China, inhabitant of oppressed Europe or member of the forces of liberation, we stand on the threshold of what could be a new world: whether we cross that threshold or are elbowed back into the dark passage that leads to another holocaust, depends primarily on our attitude to education, on the steps taken during the next few years to bring to the common man everywhere a realization of his inheritance as a citizen of the world and an awareness of his power to mould his own destiny. What is needed above all is an overriding sense of human solidarity such as can come only from consciousness of common origins. Divided we fall victims to tribal leaders: united we may yet move forward to a life of elementary decency.

Extension of facilities for education in the post-war era may be anticipated with confidence, identified as it is in the public mind with equality of opportunity. The machinery for achieving this—raising the school leaving age, securing entry to places of higher education for those most fitted to profit, and the provision of extended education for wage-earners—should not of itself be difficult to devise and once in operation should even go some way to solve the problem of leisure, which a social utilization of productive capacity would render acute. The problem is not one of means so much as of ends, for an extension of educational facilities is to be welcomed only in so far as the education to be provided is of itself sound. Were it a case merely of extending to the masses an education hitherto confined to the rich, the problem would be comparatively simple, but there can be few who see the going so easy as that. Propagation on a wider basis of a system of education with limitations lethal to the well-being of the world constitutes, indeed, one of the outstanding dangers of the post-war period. It may easily happen

that the looked-for blessing may in fact turn out to be a curse. The prospect of a substantial broadening of educational facilities makes it more than ever necessary to reconsider the nature and purpose of education. The opportunity is great, the menace real.

The most sweeping criticism levelled against modern education is that it lacks coherence and direction, other than those imparted by sectional interests or the ambition of the individual to further his success in a chosen career. To quote Mr Walter Lippmann (1):—'Modern education has renounced the idea that the pupil must learn to understand himself, his fellow men and the world in which he is to live as bound together in an order which transcends his immediate needs and his present desires. As a result the modern school has become bound to conceive the world as a place where the child, when he grows up, must compete with other individuals in a struggle for existence. And so the education of his reason and of his will must be designed primarily to facilitate his career'.

The consequences of this educational void, which we now call education, are as we know too well, economic misery in domestic affairs, total war in foreign. If educational reform meant no more than that larger sections of the population are to be drawn into this void for a longer portion of their lives, then we might well despair of the future; the only result could be a still further undermining of the prospects for a healthy, social and international existence in the years ahead. The democratic drive for education might easily create conditions mortal to democracy.

It is not the purpose of the present essay to review the various remedies proposed, to discuss the value of this or that dead language or this or that system of belief, but rather to urge the thesis that human well-being should be the overriding aim of education, that its value should be judged primarily by the extent to which it promotes human solidarity; in a word, that education should be truly anthropocentric. Now it so happens that the progress of the human sciences during the last hundred years has accumulated the material for integrating education on the level of world citizenship for the first time in history. Within the territories of Medieval Christendom, before the Reformation, there was certainly a system of education generally accepted and in itself coherent, but this church education was confined to a very small part of the world and within the narrow confines of Christendom itself was restricted to but a small section of the population. During the secularisation of education which followed one has to reckon with disintegration along two distinct lines: on the one hand 'professional' subjects over and above religious and legal training began to disturb the unity of education, a process greatly accelerated during the last hundred, and particularly during the last fifty years; on the other, national allegiances began to undermine the solidarity of civilized men, so that the virtues of citizenship came to be confined in their scope to the limits set by the exigencies of national policies. The result we all know—warfare fought out by the most advanced specialists, the highest achievements of human ingenuity turned to the destruction of civilization. If in the political sphere it has become obvious that national and even regional allegiances must be abated in favour of a world allegiance, so cramped has science made our human living-space, it must be equally clear that some scheme of education is required, common to the whole human race, understandable by all and tending to a common norm of conduct, being based fundamentally on the biological unity and the

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<sup>1</sup> From his Address to the American Association for the Advancement of Science, 29 December 1940, printed in *The American Scholar*, Spring, 1941. From lack of access to the original the passage has been quoted from Sir Richard Livingstone's *Education for a World Adrift* (Cambridge, 1943), p. 111.



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cultural inheritance of mankind. In a word education must be re-integrated on the broadest possible basis, nothing less than the universal experience of man.

It is a fact, which may explain many of the ills from which the world has suffered, that science turned her attention last upon human kind—the sun, the moon and the stars, the structure of the earth, the rocks, plants, insects, fishes and beasts of the field, all were subjected to the scrutiny of men of science, while Man, perhaps because made in the image of God, was accepted like a sacrament and set apart. Darwin's great achievement was to bring man down to earth, to draw him within the field of scientific observation and so to make possible his own emancipation. Anthropology, like the idea of evolution itself, was older than Darwin, but it was the publication of *The Origin of Species* that made it a subject of widespread interest and concern. In the same way Prehistory achieved a new meaning in the light of the extended vistas of human existence opened up by acceptance of the new doctrines. Together they have unfolded in the last eighty years a story of human development and achievement which ought to rank high in the heritage of every human being capable of receiving education. Yet it is a fact that, up to the present, educationists as a body have ignored the story of men as completely as did the scientists of the pre-Evolutionary era. While the study was still in its formative stages and before students had produced an agreed body of doctrine concerning the evolution and development of man and society, it is understandable that its claims to rank as a subject for general education were held in check. Today the position is different: the labours of the last two or three generations have produced a coherent picture, the broad outlines of which are generally accepted as valid, not only by anthropologists and prehistorians, but by workers in many branches of knowledge.

The key position of the study of man in the field of knowledge was early appreciated by that father of British Anthropology, E. B. Tylor, who in the preface to his *Anthropology: an Introduction to the Study of Man and Civilization*, outpaced the criticism that the educational curriculum was already too overloaded to make room for yet another 'subject' by the claim that the new science would lighten rather than increase the student's burden. Tylor put his finger on the integrating role of the human sciences when he wrote (2):—' . . . the science of Man and Civilization . . . connects into a more manageable whole the scattered subjects of an ordinary education. Much of the difficulty of learning and teaching lies in the scholars not seeing clearly what each science or art is for, what its place is among the purposes of life. . . . '

Now it is precisely in this respect that anthropology and prehistory have most to offer. One of the major ills of education today is that from the point of view of the majority, both of pupils and teachers, the curriculum appears to be made up of a bundle of 'subjects' abstracted from their context in life and bearing little or no relationship to one another. At best these 'subjects' are graded brands of intellectual pabulum done up in conventional packets; at worst they are degraded into media for the acquisition of marks in competitive examinations. An education based on such a parody of knowledge is bad, not only intellectually, but also socially; it breeds barbarians possessed of a little knowledge in restricted fields, but unaware of its relation to life in human society, individuals fit only for regimentation by bureaucrats, themselves among the most accomplished and therefore the most deplorable products of the system. Between them anthropology and prehistory, functional and historical aspects of the same basic study, give a complete picture, both of man's place in nature and of the emergence, development and functioning of human society. By focussing all upon man and his development,

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<sup>2</sup> op. cit. p. 1 (London, 1881).

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they and they alone can bridge the gap between the arts and the sciences, the humanists and the technicians. In this respect the secular study of man may yet, if it can break the crust of academic conservatism, resolve the chaos brought about by the disintegration of Christendom.

Practical details as to the manner in which the elements of anthropology and pre-history can best be introduced into the educational curriculum I do not propose to debate in this place, but there is one question which can hardly be avoided even in a general discussion. At what age should this teaching be given? Should it be reserved for adult education? Ought it to be introduced in secondary education? Or, should it form one of the foundations of primary education? My own reply would be that it could not be started too early or continued too late. The subject is precisely as all-embracing as life itself. At every stage of the individual life it is capable of integrating impressions received on any particular topic and relating them to the wider purposes, not only of the particular society, but to society and human well-being in general. In favour of beginning the teaching at an early age I would urge that interest in origins is deeply embedded in the childhood both of peoples and of individuals. As Reinach has written (3), 'the problem of the origin of the world and man, to which anthropology, geology and the kindred sciences are now systematically seeking a clue, confronted humanity the moment it became self-conscious'. The earliest efforts to supply an answer took the form of cosmogonies—'poetic attempts at reading the riddle'—the best known of which among the white races is that formulated among the Hebrews and handed down in the Book of Genesis. When interest is aroused by cosmogonies is surely the time to begin imparting an outline of the story pieced together by modern research, an outline which later education should progressively expand and into which all knowledge acquired in later years could comfortably be fitted without conscious break. Thus would knowledge evolve gradually and naturally, patterned by the evolution of humanity itself.

### MAN'S PLACE IN NATURE

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|-------|---|--|
| (i)   | The world and the Universe ..   | <i>Astronomy</i>                         |
| (ii)  | The structure and recent history of the earth and its climate ..                              | <i>Geology and climatology</i>           |
| (iii) | The antiquity of life and the emergence of man .. .. .  | <i>Biology and natural history</i>       |
| (iv)  | The human family, the distribution of its principal varieties and the meaning of race .. .. . | <i>Ethnology, anatomy and psychology</i> |
| (v)   | The symbiosis of man and nature ..  | <i>Geography and anthropogeography</i>   |

### MAN AND SOCIETY: THE DEVELOPMENT OF CIVILIZATION

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|--------|--|---|
| (vi)   | Modes of subsistence, utilization of natural resources, exchange, measurement and counting .. .. . | <i>Economics and mathematics</i>                      |
| (vii)  | The evolution of industrial processes and techniques .. .. .                                       | <i>Handicrafts, technology, chemistry and physics</i> |
| (viii) | Transport and habitations as functions of economic and social development                          | <i>Engineering and architecture</i>                   |

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<sup>3</sup> S. Reinach, *Cults, Myths and Religions*, p. 157. (London, 1912).



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|--|---------------------------------------|
| (ix) Clothing, personal adornment, decorative and pictorial art, music, dancing  | <i>Aesthetics</i>                     |
| (x) The power of the unseen in the world of the living and of the dead . . . .   | <i>Theology</i>                       |
| (xi) Social organization and the traditional regulation of communal life . . . . | <i>Sociology, law and linguistics</i> |
| (xii) The development of human society—Savagery, Barbarism and Civilization      | <i>History</i>                        |

In the present essay I am concerned only with emphasizing the importance of making education everywhere anthropocentric, of putting man as such in the very centre of the picture, and of relating all other studies to human rather than to group interests or to purely individual needs. The table given above is designed to show how a study of human development in its broad outlines can be made to introduce all the main fields of knowledge, at the same time focussing them on the requirements of man and society. Such a table could easily be amplified, but even in its present simplified form it should help to substantiate the claim that between them Anthropology and Prehistory form an introduction to knowledge which ought on the one hand to make its assimilation easier to the individual and on the other to promote its social utilization.

But the study of man should be more than a primary introduction to education : it should itself constitute a framework for education throughout life. Moreover it cannot be stressed too strongly that education is not merely or even mainly a process of imparting information. Far more important is its function of training the will and supplying motive power. The conception of pure 'subjects', abstracted from life and injected into students at stated periods during their course of academic instruction, is surely as outmoded as that of the untrammelled operation of pure 'economic law'. Education acquires dignity and value only in so far as it contributes to the larger purposes of life, among which that of living in society is foremost.

Now it is the thesis of the present essay that by society we mean human society at large, and that by consequence education should have for its prime purpose the training of the individual to live in the world as a human being, rather than as an individual or as the member of any particular association. Such a conception has, indeed, been forced upon us by modern technics. By reducing space through means of communication vastly superior to any previously known, aeronautical science and wireless have in effect made the world a unit in a sense never previously known. The world of the Greeks and the Romans was essentially a Mediterranean world : that of medieval Christendom was only slightly less constricted. Until the advent of the steamship, the new continents opened up by the great discoverers of the fifteenth and ensuing centuries served merely to enlarge the known world, and reduce its cohesion. The steamship went far to knit together those parts of it accessible by sea, but it is the long-distance airplane in our own day that has created a situation in which the whole world has become for practical purposes a single unit. Today, as Mr Willkie has recently emphasized in his *One World*, 'there are no distant points in the world any longer'. It is as easy to traverse the Continents today as it was to journey from parts of Scotland to London at Victoria's accession. Thanks to wireless, words can travel round the world almost as they are spoken. It must be sufficiently evident that the conquest of space holds of itself no promise of a better future : whether wireless and the airplane knit men together in a world community or assist in the mutual destruction of rival associations of nations depends precisely on whether constructive thought in our generation becomes world-wide in its scope or follows its old

tribal grooves. If men everywhere only hang together there seems no limit to the possibilities of human betterment : if they allow their differences to be exploited nothing is more certain than that in the name of this ' cause ' or the other they will be herded to destruction with an accomplished efficiency and a perfection of technique hitherto unknown. The dilemma is not to be avoided : it has never been easier to build or to destroy and we are too much in each other's way to be neutral. Mr Willkie concludes that if there is to be any hope of evolving a decent order ' our thinking in the future must be world-wide '. One would go further and add that our feeling likewise must be world-wide.

As the leaders of Christendom and of the national states that succeeded its dissolution appreciated, community of sentiment is founded not upon race or language, but upon tradition—in other words upon the appreciation of a common past. The transmission of this tradition and the kindling of this appreciation in the minds of succeeding generations is the historic role of education. By analogy, therefore, the realization of a world community depends on the existence of a common human past on which a common tradition may be founded. As archaeologists and anthropologists know, this common past, this common tradition, has been rescued from oblivion during the last hundred years. It is a matter of urgent and imperative importance that education everywhere should be grounded and based on the common experience of humanity, its emergence from the world of the beasts, its age-long struggle for betterment. Here, providentially, we have placed in our hands the key to a fuller world in which all men everywhere appreciate their innate community, their persistent indebtedness one to another, their fundamentally common interests. Such a world is hardly likely to be attained by those eminent educationists who advocate for humanity whatever course of instruction was esteemed in the days of their youth in the particular society in which they happened to find themselves. The author of a recent book on education recommends a blend of Hellenism and Christianity as a panacea. (4) Had he been writing exclusively in respect of the British middle classes his thesis might have had more relevance, but on the showing of the title of his book he has the whole world in mind, a world composed of the most diverse elements in the tradition of many of which neither Hellenism nor Christianity have played an important part. To the peoples of the world generally, the peoples who willy nilly must in future co-operate and build or fall out and destroy, I venture to think that Palaeolithic Man has more meaning than the Greeks. Dig up a Greek vase in the suburbs of Pekin and you bring to light a mere freak, the discarded treasure perhaps of some collector from the West : excavate Pekin Man and his crude implements and you establish ground of common interest to educated men of every race, something which concerns them all equally as men.

It follows, if we approach education from an evolutionary point of view, that instruction should first be given in those subjects of broadest concern to mankind at large, the special characteristics and problems attaching to particular societies and cultural traditions being reserved for later stages in the educational process. Primary education the world over should thus be concerned first and foremost with broad outlines of the human story, viz. :

- (a) The relation of man to the universe, stages in his evolution, the definition of his principal varieties, their distinctive features, their distribution, their common origin and their common nature.

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<sup>4</sup> Sir Richard Livingstone, *Education for a World Adrift*. (C.U.P. 1943).



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- (b) The outlines of world prehistory from the earliest times to the period of the discoveries basic to civilization, broadly speaking from Palaeolithic times to the Bronze Age, from Savagery to Barbarism.

Introductions both to the natural sciences and to the problems and experiences of human life, economic, social, aesthetic and religious would follow easily from such a grounding. Thus would the whole field of knowledge be brought gradually into view, not as a congeries of abstract 'subjects', but as a natural and necessary extension of the life of humanity at large. Brought up in such a primary education one might have some grounds for hoping that mankind would be immune from some of the more outrageous deceptions of its leaders. Had the German, Italian and Japanese peoples of the present generation received a grounding in the natural and cultural history of mankind, it seems impossible that they could have been mesmerized by the crazy dreams of racial and cultural domination which today are sweeping them to ruin. Illusions as fatal as these will not be dispelled in any final sense by military defeat alone. Sanity and a better disposition can be made to return only after a lengthy period of education. Let us hope that a liberal dose of elementary anthropology and prehistory will be prescribed, rather than the history of modern states, perverted in its national guise, but suspect in any other.

When the common basis of understanding has been laid, then comes the time for building an edifice in accordance with whatever cultural tradition prevails in the society concerned. Diversity of cultural inheritance is a fact highly persistent and at the same time of the highest value to humanity at large, even if in the recent past it has been exploited in the interests of power-maniacs to lever great communities into destructive conflict. (5) Properly handled, diversity in the inheritance of communities, like that of individuals, should redound to the general advantage. Right education is and must always be the only insurance worth taking out against the destruction of our inheritance, and the basis of this must surely be that all men are brought to realize that their community goes deeper than their diversity. It is, thus, the highly responsible task of secondary education to introduce adolescents to the distinctive features of their own particular cultural inheritance in such a way as to promote rather than impede the larger aim. The distinctive genius and traditions of peoples and national communities should be a joy and a glory to every individual in them, something to be treasured, but also something to be dedicated to the purposes of all humanity—if not so dedicated they will sooner or later be exploited to subvert the purposes of tribal policies and in due course impoverished, if not destroyed, by war.

It follows logically from the evolutionary position that modern history and current affairs, which have come to play an ever-growing part in teaching, ought to be reserved for the closing stages of secondary or even for higher and adult education. Modern history, the more it approaches our own times, approximates to discussion of modern problems and such discussion, if not used to give currency to some form of propaganda, can only serve to confuse minds not sufficiently equipped to grapple with them. There is much to be said for school history books stopping short at 1789, provided that further instruction is forthcoming either at the University, or in the course of some form of extension teaching. The child and the young scholar should learn his lessons in an epic school in which whole eras can be comprehended. In the primary school he should learn of the childhood of the race, in the secondary of the birth and growth of his own peculiar

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<sup>5</sup> See the present author's *Archaeology and Society*, chap. VII (London, 1939). It is fair to add that this would have been stressed differently if written today.

civilization ; only on the threshold of adult life should he be plunged into the complexities of modern history, the problems of which are in many cases contemporary.

Insistence on the universal aspects of the study of Man should not be in the least inconsistent with enjoyment of traditions shared in common by nations or smaller associations of individuals, held together it may be by no more than common residence in an administrative county or borough. On the contrary, since the young learn most easily by illustration, it must be evident that even the elements of world prehistory will in practice be taught in terms of the local hill-fort, gravel-pit, or museum. Moreover, any tendency to dull uniformity should be finally dispelled at the secondary stage, when the individual is brought to a study of the upgrowth and development of his own cultural background from Barbarism to Civilization, and the era of recorded history. Then the subject matter of teaching will vary broadly according to local or national tradition. Whereas the young European will learn of the Aryan-speaking peoples, in particular of the Celts, the Teutons and the Latins, of the achievements of Greece and Rome, of medieval Christendom, of the Renaissance and of the rise of national consciousness, the young Indian will be more concerned, *pace* Macaulay, with the development of his own civilization from Mohenjo-Daro to the European encroachments. The Indian's interest in Greece and Christendom will be secondary : the former he will study mainly for the effects of Alexander on his own history, the latter for the light it throws on the European conquerors and overlords of the last two centuries.

Realization of a world order based on the extinction of diverse national traditions would be Dead Sea fruit indeed, for it is only by the cultivation of their diverse traditions that national communities can contribute anything of value to the international comity. From this point of view domination of the world by the concepts of Hebrew prophets or Greek oligarchs would be every bit as bad as subjection to any one of contemporary ways of thought. If as individuals or peoples we have contributions to make, let them be genuinely our own, welling up from the springs of our own being. Traditions rooted in remotest antiquity, form a heritage of incalculable worth, valuable alike to the society, its individual members and the ' One World ' ; their cultivation and perpetuation should be a prime concern of society in general and of educationists in particular. As trustees of a world empire the responsibilities of the British people in this sphere are immense. The stimulation of interest in their own cultures is something we owe, both to the indigenous peoples themselves and to the well-being of the Empire. In this respect we have something to learn from the USSR, the constituent peoples of which have been encouraged in the study of their own specific cultures, with results which not only enrich their own lives but also strengthen their will to preserve the Union in time of trial. No amount of political or economic well-doing can compensate for lack of appreciation of, and sympathy for, native culture. Recognition of anthropology in the training of Colonial Probationers, while doubtless intended to promote smooth administration, is a step in the right direction, but there is room for an even more positive attitude to indigenous culture ; specialized archaeological and anthropological services and the education of peoples in their indigenous history are urgently needed.

Throughout my argument emphasis has lain on the role that anthropology and particularly prehistory must play in education if the new world order is to have more than an ephemeral existence. But it has further been suggested that if life is to be worth living we must be careful to maintain and, indeed, to develop that diversity of cultural tradition by which peoples are distinguished and through which alone they can enrich humanity. The absolute value of cultural tradition needs to be stressed today as never before, since conditions of life in the dominant nations of the world, engendered by the



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Industrial Revolution that brought them to the position they now occupy, threaten to dry up its very well-spring. The drift to great cities, the decay of craftsmanship, the impoverishment of family life and the sweeping away of standards of traditional behaviour are only a few of the symptoms of a process of mass deculturalization. (6) The pattern of life, even its very fabric, has been sacrificed in great industrialized communities to the pursuit of economic efficiency. The mass satisfaction of artificial wants, stimulated and standardized by advertisement, may 'raise the people's standard of living', may increase the size of their bodies, may even prolong the duration of their lives, but can hardly of itself enrich them in any genuine sense. In a world of economic and political anarchy everything must be sacrificed to industrial efficiency in the interests of bare survival, and education must be geared to the production of administrators and technicians and the schooling of the grey masses. The reversal of these trends depends primarily on the realization of a world order under which it will cease to be necessary to concentrate on the mere preservation of society. But international security, while it might lessen the drive, cannot of itself cure the ills of society. Intelligent readjustment of the relations of town and country, by bringing town-dwellers into closer contact with the rhythm of rural life, might go some way to restore the balance. But from a long-term point of view it is only by tapping the accumulated treasures of human experience that successive generations can be restored to a full measure of life. From the traditions and achievements of the race we may yet draw inspiration and, refreshed from the deep springs we may yet shake free from the nightmare of vicarious existence.

Man, it has been said, differs from the beasts in the possession of culture. As a cultural being he can lead a full and satisfying life only in so far as he conforms to cultural patterns. It is a tragedy of our time that millions, possessing equal political 'rights' in the most advanced states and 'enjoying' a standard of life beyond the wildest dreams of the emperors of antiquity, are ceasing even to be conscious of culture. The 'cultural orphans', who proliferate in our great cities, constitute, like the infiltrating barbarians of antiquity, a fifth column of portentous dimensions. If civilization is to survive, the process must be reversed, decisively and on the broadest front. The process of deculturalization must be arrested and men made conscious once again of their heritage as cultural beings.

*The substance of this article was communicated to the Conference on the Future of Archaeology held recently at the London University Institute of Archaeology.*

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<sup>6</sup> During the evacuation of urban centres in the present war the country has realized with something of a shock the progress of deculturalization among the population of industrial cities. Thus a speaker in a recent House of Lords debate, a former professor of anatomy, is reported (*Daily Telegraph*, 6 May 1943) as remarking that 'these people who came from the cities—women and mothers—seemed quite unable to do anything very much for themselves, and . . . were quite obviously without any effective social tradition'. The children were like untrained puppies and about 10 per cent. of the evacuees, he estimated, were 'deplorably and absolutely cultural orphans'.

## George Reisner: An Impression

by J. W. CROWFOOT

IT is more than thirty years since I first met George Reisner. He was then in the prime of life, a short sturdily-built man with a mass of straight black hair, a closely clipped moustache and a determined chin. He was wearing spectacles with very powerful lenses and, as usual, had a pipe in his mouth. His fingers were short and stubby and it was rather terrifying to see him manipulating some delicate antiquity. There was nothing Germanic about him except his name—he was born in Indianapolis of a family which had migrated from Europe, I believe, in the Napoleonic era. Nor was there anything obviously academic; he looked and talked like a forceful 100% American of the breed of Theodore Roosevelt, strong, open and friendly. He used to say, probably with truth, that he might have made a fortune in business if he had not chosen a different career.

At that time his repute in Egypt as an Egyptologist was second to none. He held a concession over a large part of the premier site in Egypt, the mastaba field round the pyramids of Giza, and he had only recently relinquished the post of Archaeologist to the Nubian Survey of the Egyptian Government. This was a survey started by the Government to examine the area which would be regularly inundated when the new project for raising the dam at Aswan had materialized. As archaeologist to the survey Reisner set gangs of trained diggers to probe every square metre of soil in the threatened area and in the process he revealed a series of cultures so novel that it seemed best for the present to designate them by letters of the alphabet, A, B, C, and X. The puzzling problems they posed fired him with a desire to go farther south in search for their solution and that was where I came in. I had been in the service of the Sudan Government from 1903 to 1908, and it was to discuss the possibilities of excavating in the Sudan that a meeting was arranged between us by Edward Quibell. We met in Cairo and a few days later I paid the first of countless visits to the Harvard-Boston camp on the high desert plateau above the pyramid of Mycerinus.

As a young man Reisner, after graduating in the Semitic faculty at Harvard (PH.D. 1893), had gone to Germany with a travelling fellowship. He studied cuneiform at Göttingen and Egyptian under Erman at Berlin, the latter to so much purpose that he was appointed for one year an assistant in the Egyptian Department of the Berlin Museum. His work in Egypt began in 1897 when he became a member of the international staff engaged on the *Catalogue Générale* of the Egyptian Museum in Cairo; he studied Canopic jars in the Museum and wrote the volumes in the Catalogue dealing with amulets and models of ships and boats. He had already edited a selection of cuneiform hymns in 1896 and was to publish another volume of cuneiform texts in 1901. His career up to 1899 had been that of a successful *Stuben-gelehrte* working in libraries and museums, studying antiquities and texts both cuneiform and hieroglyphic; he had done no field work and he was already some 32 years old. In 1899 a new vista was opened: the University of California appointed him Hearst Lecturer in Egyptology and Director of the Hearst Expedition to Egypt, two posts founded by Mrs Phoebe A. Hearst, a wealthy lady whom he had succeeded in interesting. The first site he excavated



## GEORGE REISNER : AN IMPRESSION

was in Upper Egypt, some early cemeteries at Nag'ed-Deir. In the technique of digging he was his own master, but he had already formed his own ideas how a site ought to be excavated. His system of field records, which has been so widely adopted since, was tried out here for the first time, and a number of the workmen who were to be with him for more than thirty years now began their training. His work at Giza started in 1902 when the Egyptian Government decided to divide the Giza pyramid-field between three concessionaires : the area nearest to the pyramid of Mycerinus was given to Reisner as head of the Hearst Expedition, a second zone was given to a German expedition under Steindorff, and a third to an Italian expedition under Schiaparelli. In 1905 both Schiaparelli's concession and the old Hearst concession were given to Reisner as representative of a new expedition sponsored by Harvard University and the Boston Museum of Fine Arts. Henceforth he was responsible for 'two-thirds of the great cemetery west of the Cheops pyramid, the area of the pyramid of Mycerinus, and that east of Cheops pyramid as far south as the Sphinx'—a vast field where he worked off and on, *ohne Hast und ohne Rast*, for the rest of his life.

Once, and only once, Reisner was tempted to work away from the Nile Valley—for two seasons (1909, 1910) he acted as Director of the Harvard Excavations at Samaria. Samaria was an important centre long after it had ceased to be the Israelite capital and there were heavy accumulations of the Hellenistic and Roman periods above the Hebrew city. Reisner was little interested in the classical remains but he worked through the upper strata conscientiously and was filled with enthusiasm when he reached the magnificent walls of the Israelite period : at the end of the first season it seemed the greatest piece of work he could ever hope to have a hand in. A year later he felt differently ; the hill was so vast that it would be a pure chance if he found anything of the first importance even in a ten years' campaign. The notables on the spot were very tiresome and the Turkish Government though mildly appreciative and ready apparently to extend the firman, declined to give the expedition any share of the finds, even duplicate pots. Reisner was still convinced that work ought to be continued at Samaria and was most helpful when a second expedition resumed operations there in 1931, though he could not be persuaded to revisit the site.

On the other hand, he made frequent expeditions into the Sudan. The Kerma basin at the north end of the Dongola province was the first site on which he pitched. This was in 1913 and the amazing discoveries which he made there encouraged him to return again and again during the next 18 years. From Kerma he went to Jebel Barkal and the pyramid fields thereabout in the south of the Dongola province ; thence farther south to the ancient Meroe, and finally to the chain of Middle Kingdom forts which guarded the roads alongside the second cataract ; the last of these expeditions worked at Shalfak in the Halfa province in 1931. Reisner grew very fond of the southern lands. Dongola province with its groves of date palms and its pink and white buildings delighted him ; Sir Herbert Jackson was still alive and Reisner described his administration as 'an ideal of good government'. These expeditions, which rarely took more than three months, formed a pleasant break in the year ; they gave him a number of fresh problems because the Sudan was an almost virgin field, and they provided rich hauls of the smaller antiquities in which the Giza site was relatively poor—an important consideration to a man who was serving two masters, one of them a museum which had to think of the people who visited its galleries.

All these years Reisner lived in the Harvard-Boston camp. The site was ideal : in the foreground the three great pyramids, beyond them the Nile Valley, on the sky-line to the east Cairo and the Moqattam hills, the Delta stretching away to the left

and behind one the desert. The Egyptians Reisner described as 'a race of peasants with an unconquerable desire to see green things in growth', and from this vantage point he could watch the Egyptian pageant from month to month, the filling of the canals when the Nile rose, the flooding of the Giza basin, the subsidence of the waters and the return of the villagers to their fields. Most Egyptologists are birds of passage spending half the year travelling, lecturing at home, organizing exhibitions, whipping up subscribers. Reisner was more fortunate: he held professorial posts at Harvard and a curatorship in the Boston Museum, but he persuaded his authorities that he could serve them best in Egypt and his leaves of absence became longer and longer; his work gained in substance and life.

The camp, though he made it his permanent home, never became anything but an excavation camp—rooms built of rough uncut stones round a square court where recent finds were usually lying in the open, the walls unplastered outside and inside. A passage between two rooms on the south side led into the court: left of the passage against the outer wall was a large enclosed verandah where Mrs and Miss Reisner entertained visitors. Reisner's office was in the northwest corner of the court, a long room with a bay looking north across the desert; two rows of tall boxes knocked up of common deal were arranged on shelves along one wall to hold his working library; along another wall more boxes held an ever-lengthening series of expedition records, year by year and site by site; his own table and the tables of assistants and draftsmen filled most of the floor space. Photographic rooms and store rooms ran along the west side of the court; the dining room, bedrooms, kitchen and so forth were on the south and east sides. On a lower ledge of the plateau nearer the pyramids was another building occupied at the time of our first visit by Dr Fisher and his family; on a ledge to the north of this were the quarters of the Egyptian workmen and camp servants and, in later days, a garage and stabling.

The camp servants were all fellahin from Upper Egypt. They ran the marketing, cooking, waiting, housework and laundering, and they ran things well; the camp was a place of plenty and comfort, himself was 'voracious and had a sweet tooth'—he liked to start the day with grape-fruit and end it with a large plateful of ice-cream and to wear freshly laundered clothes in the evening. The chauffeur and stable boys, the men who built the camp and made the bookshelves and tables, all came from the same group of villages. Many of them had spent the whole of their working lives on the pay-roll of the Expedition, starting as basket-boys on an excavation and being trained for special duties according to their individual aptitudes. Besides the servants there were always some of the regular diggers about, acting as guards or cleaning up some monument when no bigger work was on hand. Reisner had devoted great pains to the training and management of his workers; he discusses the question at length in his *Samaria* publication (I, p. 42) and his words are worth quoting:—

'It is indispensable to a thorough scientific examination of a site that the work be performed by a trained staff, and a trained gang of workmen who go through the necessary operations (1) as a matter of habit . . . the workmen are merely the excavator's

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<sup>1</sup> 'Workmen must distinguish between fallen stones and walls; stones struck with the pick in the débris are not to be pulled through the débris, but cleared; no floor is to be broken except by order, even when it is only a thin layer of hardened earth; every fresh stratum is to be worked by itself, but only on order; the objects from each sort of débris are to be kept separate; the workmen must have enough knowledge to recognize important objects; such objects (whole pots, inscriptions, statuettes, etc.) must be left in position and reported at once; no cave or other room is to be entered except by a special order; no pot, box, or other receptacle is to be emptied except by order'.



## GEORGE REISNER : AN IMPRESSION

hands, and the closer the connexion between the actual diggers and the directing intelligence, the more satisfactory the result. The excavator must speak the language of the workmen, and give his orders directly to the men. Another most important point is to cultivate the loyalty of the workmen. It may be taken as a rule that good pay, steady work, kind but firm treatment, must be the basis of all Oriental faithfulness. Good work and faithfulness must be rewarded, and the opposite punished. Mistakes in this matter are fatal. Beyond this, no hard-and-fast rules can be laid down. . . . The fellah, both in Egypt and in Palestine, understands personal loyalty, and has practised it for ages. It is only necessary for the excavator to be loyal to his men to gain their loyalty for himself. Without this it is impossible to hope for an efficient corps of workmen'.

Reisner's better men were extraordinarily good, loyal, trustworthy and competent, especially the foremen, who came from families with an established position in their own villages which gave them the authority to control others. The best of all was a certain Said Ahmed who had joined the expedition as a small boy in 1899 to carry Reisner's camera and note-books ; he became head-reis in 1909 and the Arabic diaries of the work which he used to keep and illustrate with measured drawings would have done credit to a student with a University training. His premature death in 1926 was a terrible blow to Reisner : ' For twenty-seven years ', he wrote, ' he had been like a son to me ' (2).

It was inevitable that a man who lived in such intimate relations with his workers should be deeply concerned with all that touched their well-being. Reisner used to follow the course of Anglo-Egyptian politics very closely and his advice was frequently sought by the diplomatic representatives of his country. The outbreak of the first world-war was a bitter blow ; he had spent years in Germany and had a host of German friends but he was wholeheartedly with us from the very first days. He had little sympathy with Egyptian nationalist politics but throughout the negotiations over Mr Rockefeller's offer in the post-war period he was one of the strongest upholders of the Egyptian Government. He was innocent of the acquisitive foibles of an older generation of antiquaries and a Puritan of the Puritans in the matter of the purchase of small antiquities, knowing how much science has suffered from clandestine digging in Egypt and how easily an excavation camp may be turned into a den of thieves. Where the laws or regulations of any government, Egyptian, Turkish or Sudanese, were concerned he was *sans peur et sans reproche*. While digging was in progress Reisner regularly posted me copies of his diary so that I could follow the work closely (as Director of the Education Department I was responsible for the administration of the Sudan Antiquities Ordinance, 1914-1926). At the end of the season the larger finds were laid out on the site, the smaller ones in the camp at Giza, each was checked against its description in the Object Register, the various series were grouped in lots as nearly equal as we could make them, and we tossed for first choice.

In some of his longer publications Reisner has laid much stress on the methods he had elaborated, the diaries, card catalogues, photographic records, object registers and the like ; page after page in some volumes is filled with tables of statistics. I think this insistence on such scaffolding, however necessary, has done his credit in the world some wrong. Before he began to excavate he was a philologist and his aim was the interpretation of the whole of ancient life with all the precision of which the material admitted ;

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<sup>2</sup> I visited the camp a few months later and inquired after Said : ' May you live ' was the sad reply ' but Said is dead '. He was widely mourned ; in the same autumn, happening to be in Samaria, I mentioned his death to one of the people there as a sad piece of news, ' Yes ', he said, ' I wrote a letter of condolence to the family long ago and have received their answer '.

he had no use for the tabulation of minute particulars which did not lead to some new synthesis. In a tomb at Saqqara the bottom course of a doorway with the door slab set ajar was found by Firth a few years ago ; it looked bizarre as if the stone must have been miscut or mislaid, until Reisner quoted a verse from the *Book of the Dead* which says that the soul returning shall not find the door closed ; the conception could hardly have been otherwise translated in stone and the bizarrerie had vanished. The Giza necropolis contains the works of the first early society of men and women who have left us their names and careers and portraits, and it was to interpret their customs and beliefs, to show how natural and reasonable they were, that Reisner set himself.

The most sensational of his finds and the most laborious piece of work he ever tackled was the funeral deposit in the tomb of Hetep-heres, mother of Cheops, the builder of the great pyramid. The deposit had been stored in a chamber off a shaft about 100 feet deep, which was discovered in February 1925 when Reisner happened to be away on one of his rare visits to America and Alan Rowe was in charge of the work. The shaft was resealed, and guarded until Reisner returned to take over the clearance. This involved installing an electrical plant of about 4000 candle-power to illuminate the chamber, a winch above the shaft and new workrooms at the camp. The furniture included a gold-cased canopy, m. 3.20 long, 2.50 wide and 2.20 high, armchairs, an inlaid jewel box, a bed with a headrest, an alabaster sarcophagus and a mass of toilet articles, gold vessels, jugs, jars and pots. The canopy had been dismantled before being placed in the tomb, which was not the original burial place of the queen ; the wood of the furniture had shrunk or decayed, the gold sheathing and inlays had broken away and collapsed on the floor which was littered to a varying depth with myriads of fragments, but the tomb was intact so far as the hand of man went, and for reconstruction it was essential that the position of every tiny fragment should be recorded. When they had rigged up the necessary apparatus Reisner and his assistants, Dows Dunham and Lieut-Commander N. F. Wheeler, sat or lay down to play the longest game of spillikins on record. It took them 326 days of work, lit by dazzling reflectors, in a close atmosphere and tormented by fleas, ants, flies and other insects, to clear the room of everything except the sarcophagus, and it was not until 10 March 1932 that the gold-cased canopy of the mother of Cheops was finally handed over to the Cairo Museum. It is pleasant to record that the Egyptian authorities gave the Boston Museum in recognition of this achievement a superb masterpiece of ancient portraiture, the painted limestone bust of Prince Ankh-haf.

Objects as old and almost as exquisite in style have been found in other parts of the world but nowhere else is there such precise evidence about the society for which they were created. At Giza much evidence existed, though it is not yet fully published (3). Beyond the royal cemeteries of dynasties IV-VI there were a number of smaller mastaba complexes belonging to the families which in that stable society held for generations great offices of state as Overseers of Works, Stewards of Estates, Royal Gardeners, Priests of this or that Pharaoh : all the material for a sort of Court Directory is lying there to hand. Their beliefs and customs were so different from ours that it requires some imagination to recognize them as men and women of like passions. Reisner had this imagination, and living for years amid the same scenes, surrounded by men who might have been servants of the Pharaohs, he came to speak of them as personal acquaintances and as if he shared their views on life and death. Take for example his account of 'A Family of Royal Estate Stewards of Dynasty v' in the Boston Museum Bulletin for April 1939.

<sup>3</sup> *The History of the Giza Necropolis* and *The Giza Mastabas* on which Reisner has been working for years have not yet appeared.



He begins by reminding us that 'as the members of a family had lived together on earth, their tombs were built close to one another in order that their *kas* might be brought together in the life after death'; and as four generations of this family had served the royal family for a hundred years they built a complex containing four large mastabas. Reisner describes the career and buildings of the head of each generation in turn:— in the second generation a brother-in-law who was 'director of music of the Pharaoh, delighting his lord with good singing in his palace' elected to be buried with his wife's family; in the third generation the figure of the founder of the family was carved yet again in a new chapel but 'it is doubtful', says Reisner, 'if the old grandfather ever saw that figure when he was alive, but he may have seen it as a glorified soul after death'; the fourth generation was poorer. In another number of the *Bulletin* (December 1936) he discusses the memorial of a dog which the king honoured with a mastaba and a coffin with linen wrappings, with gifts of incense and perfumed ointment—'All this was done in order that the dog might become an honoured soul before the Great God of the living dead. It must be emphasized that he was not to become a man, but his *ka* as a dog was to be treated with all the favour and affection he had received from the king and his owner'. In the *Mycerinus* volume he describes with copious illustrations the methods of measuring and pounding and polishing employed by the sculptors of the period, and then analyzes, like a modern art critic, the temperamental differences of these nameless artists who are among the foremost portraitists of all time.

The finds in the Sudan were treated in the same spirit. A startling innovation there was the horse-cemetery discovered at Kurruw in the neighbourhood of Jebel Barkal, four rows of graves with four or eight horses in each, buried with all their trappings, gilded silver plume carriers, strings of beads and amulets and so forth. The cemetery dated from Dynasty xxv and one of the chariot teams belonged to Piankhy, who was already known as a lover of horses from the inscription in which he told of his anger at finding the horses of Namlat starved. A new funeral custom unsanctioned by tradition was hailed as a revelation of Piankhy's character, 'his pride and his mental boldness' (*S.N. & R.* 1919, p. 254).

But perhaps the most brilliant of Reisner's readings of the past is the account he gives of the funeral ceremonies at Kerma. Kerma was a southern outpost of Egypt in the time of the Middle Kingdom (Dynasty xii), the seat of a considerable Egyptian colony headed by the Viceroy and his staff. Working with novel materials this colony produced some of the finest pottery ever made in the Nile Valley and curiously decorated leather garments, but the funeral customs they practised were far more remarkable. Suttie ritual of which there is some trace in early Egypt was revived on a vast scale. The dead were buried under low tumuli which varied greatly in size, four of the largest measuring from 70 to 90 m. in diameter. A broad corridor filled with human bodies ran across the larger tumuli; in one of them 322 bodies were found and there may originally have been 400, in another where Hepzefa, an Egyptian viceroy from Assiut, was buried, 45 bodies were found and the original number was estimated at about 100. In the Egyptian cemetery the bodies with very few exceptions were those of Egyptians and a large majority were female, some of them with children; they belonged without doubt to the harem and household of the principal occupant of the tumulus and the evidence showed that they must have lain down voluntarily in the corridor, though a few gruesome details suggest that at the last moment 'a rustle of fear passed through them and that in some cases there was a spasm of physical agony'. Other evidence showed that, having smothered their victims beneath basketfuls of earth, the burial parties sat down to enjoy the funeral bakemeats on the top of the tumulus. On a reduced scale a

similar ritual was observed in the neighbouring Nubian cemetery. Reisner's interpretation of the underlying ideas, reached, he says, after years of reflection, is extremely interesting but too long to quote in full. Many details were observed which were neither atavistic survivals nor due to contamination with primitive Nubia. 'Why were all the chief men and most of the human sacrifices laid with their faces towards Egypt? Why were none of those buried after death wrapped in the impeding bandages of the Egyptian dead? Why was a pair of sandals so essential, found in some cases actually worn on the feet of the dead? . . . All this points to a return to Egypt. Nevertheless, other facts indicate that the spirit remained in the grave. . . . But whether the spirit of Prince Hepzefa, for example, was setting out on the long journey to Egypt or was remaining to face the unknown spirit-world of the Sudan, his need for the company of his family was more urgent than in Egypt. The family itself was in a still more difficult position. If they lived on and died singly, whatever perils the afterlife might bring . . . all must face alone without the aid and protection of their master. Only a few moments of present pain separated them from his familiar presence. . . . The fact of continued existence under the accustomed habits of life on earth was not a matter of doubt. . . . Thus self-sacrifice . . . was not a cruel inhuman thing, but rather a kindly custom, an act of loyalty which provided both him who had died and those who offered themselves to a living death, with the assurance of the continuation of the long-accustomed family life in the other world'. (*Kerma*, I, p. 77).

Reisner died in the camp on 6 June 1942. His last years were clouded with failing sight and other physical disabilities. He was almost blind when I saw him for a few hours in 1937, but as affectionate as ever and still working hard. Worse was to come: in 1915 'the unsettled condition and the danger of sporadic riots' in Egypt had compelled him to take Mrs Reisner and his daughter Mary into the Sudan, and the more imminent perils which seemed to threaten Egypt at the beginning of the present war compelled him to send them back to America. He stayed on himself in the camp with his Egyptian fellahin and one or two assistants, typing and dictating, working until the end.



# Trialeti

by ELLIS H. MINNS

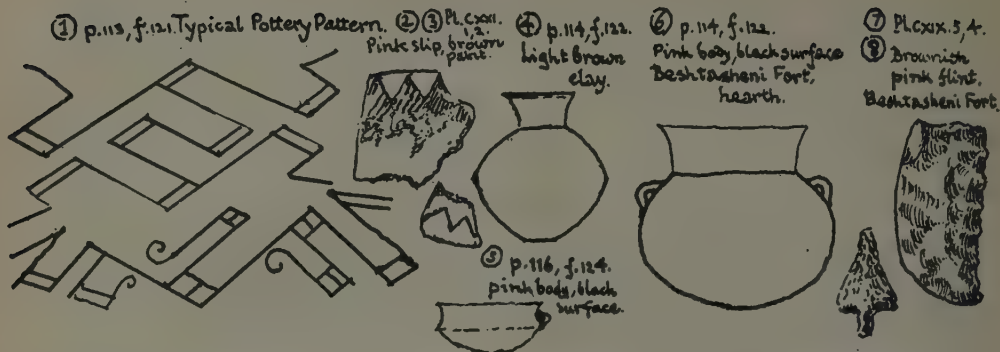
ARCHAEOLOGICAL EXCAVATIONS IN TRIALETI. By B. A. Kuftin (Academy of Sciences of the Georgian SSR., Institute of History). Tiflis (Tbilisi), 1941. 1. An Attempt to divide the Material into Periods. 4to, pp. 133 of Russian text, 36 of Georgian and English summaries, 50 of indices, references, etc. 132 text-figures, largely of objects for comparison, and 129 plates, of which 20 in colour.

THE archaeology of the Caucasus and of Transcaucasia may be said to date from the seventies, when the rich chance finds on the northern slopes near the Daryal pass attracted the attention not only of Russians, but of Western scholars like Virchow and Chantre. J. de Morgan dug in the Talysh on the Caspian coast, at Lelwar in Armenia and at Alagöz, and indulged in rather wild ideas about metal-work originating in the Caucasus. Later, painted pottery began to turn up near Erivan and at Kyzyl Vank near Nakhichevan, the Koban culture had been found to extend to Abkhazia and to the valley of the Rion, and much attention had been paid to the Urartu civilization, but on the whole little had been done in Central Georgia. Moreover there was much confusion with regard to the finds in the main range, vitiated as they were by predatory methods and by the situation of the cemeteries on steep slopes, so that things tumbled down the mountain into places where they did not belong. Hence the Countess Uvarov's great attempt to gather them together in reasonable order (*M. Arch. Cauc.* VIII) was unsuccessful.

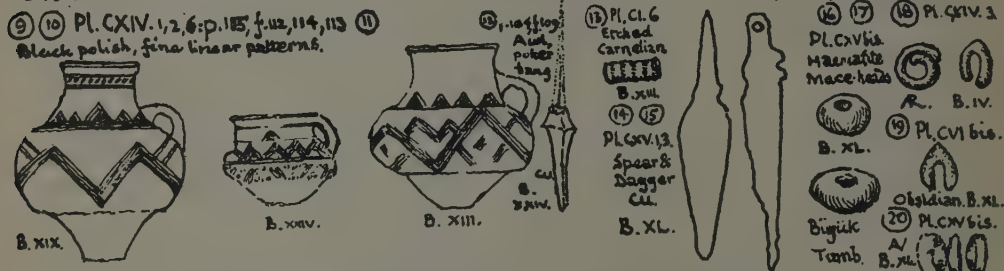
The results made accessible by our author mean a very great improvement on this state of things. His work is due to the need, recognized at once by the Soviet authorities, to discount the destruction of archaeological material bound to result from the construction of a great hydro-electric station Žages, to utilize the river Khram (or Ktsia), a western tributary of the Kura (Mtkvari). T'rialet'i is an old division of Georgia about 40 miles west of Tiflis, part of it (lat. 41° 40' N, long. 44° E), is called Tsalka (Tcal'ki). Here the Khram runs through a valley of about 1500 metres up with plateaux rising to 2500 metres on each side; on the north sloping down to the Kura trough, on the south rising to the lesser Caucasus. The Tsalka expedition worked from 1936 to 1940. A short account appeared in *Kratkie Soobshcheniya IIMK*, VIII, 1-35, summarized in *Nature*, July 1942, 28.

The author reports no palaeolithic; he deals with an epipalaeolithic shelter, with a chalcolithic site, with Early Bronze age barrows, with a rich Middle Bronze age culture distinguished by painted pottery and gold work, and with various stages after the Late Bronze age. The Middle Bronze age finds are by far the most striking, and in order to make it quite clear that they cannot belong to any later period, his method is to work backwards from Sassanian to the beginning: as we have no thesis to prove we may take the chronological order in our summary, first pointing out that the Middle Bronze age material is quite new, and not like the Armenian, and that the later finds enable us to set in its right place much material already known. The only drawback is that save for

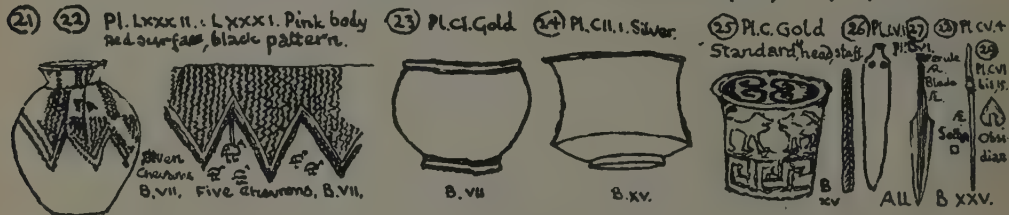
# CHALCOLITHIC B.C. 3000+



## EARLY BRONZE B.C. 2250-2000 B.C. Barrows IV, X, XII, XIX, XXIV, XL.



## MIDDLE BRONZE. B.C. 1750-1500: CLASS I. Barrows with pits, I, VII, XV, XXV.



## INTERMEDIATE CLASS. Light Body, Black Barnish.



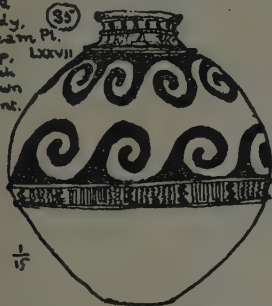
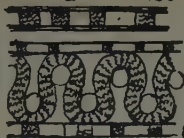
TRIALETTI I



MIDDLE BRONZE. CLASS II. Barrows V, VI, no pit; XI, XVI, XVII, with pit; xxxvi stone chamber.



34  
Red  
body,  
cream  
slip,  
dark  
brown  
paint.



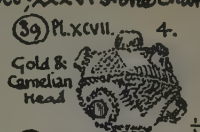
35  
Pl. LXXXVII



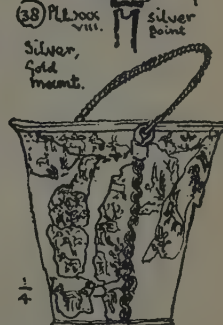
36  
Pl. XCIII  
Gold,  
Turquoise  
Carnelian.  
 $\frac{2}{3}$



37  
Pl. CV  
Silver.  
 $\frac{1}{4}$



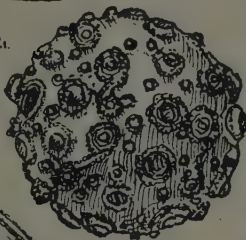
39  
Pl. XCVII.  
4.  
Gold &  
Carnelian  
head



38  
Pl. LXXX  
VIII.  
Silver,  
Gold  
mount.

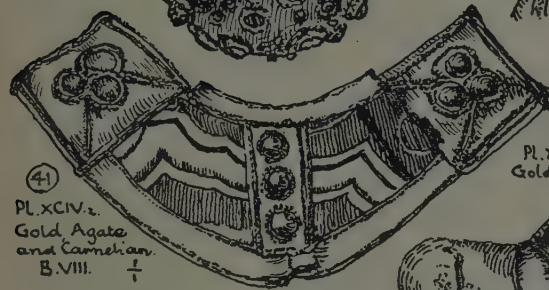
$\frac{1}{4}$

40  
Pl. XCVI.  
Gold & gems  
B. VIII.  $\frac{1}{4}$



43  
Pl. XCXII.  
Silver  
B. V.  $\frac{3}{4}$

42  
Pl. XCVII. 1.  
Gold, shell eye.



41  
Pl. XCIV.  
Gold, Agate  
and Carnelian.  
B. VIII.  $\frac{1}{4}$

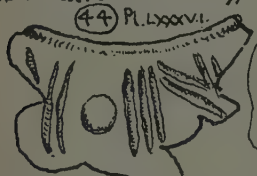


B. V.



MIDDLE BRONZE. B. C. 1750 - 1500?

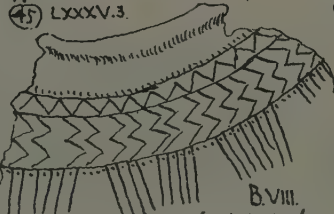
CLASS III. Barrows: VIII, VIII, IX, no pit; XCV, pit.



44  
Pl. LXXXVI.

2.

Hard pink body, black burnish, grooves  
and ridges. B. VIII.

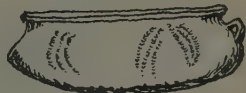


45  
LXXXV. 3.

Dark brown, deeply incised.

B. VIII.

46  
Pl. LXXXIV. 3.  
Special Class:  
Black-polished 'scyphi'  
curvilinear ornament



Only in B. XCV.

a little chalcolithic, no material is drawn from dwelling sites, and we get no help from stratification such as a 'tell' gives. Moreover this is an attempt to date the material, not a report of excavations giving full details of each barrow, and there is no map to show positions.

The earliest find is an epipalaeolithic cliff-shelter at Barmaksys with an industry mainly obsidian, partly flint (pl. cxxvi, pp. 119-124), almost mesolithic in character. Obsidian is strewn over the fields in Trialeti. Kuftin suggests that the wealth contained in his later barrows was due to the export of South Caucasian obsidian, which was much used in the fertile crescent. Neolithic sites such as occur in Western Georgia are absent in Trialeti. In Tsalka are various forts of 'Cyclopean' masonry; some were actually constructed in early medieval times (Nardevan and Avranlo, pls. I, II) but others, though occupied quite late, go back to chalcolithic: that at Beshtasheni on the Geryak Chai was best examined (pp. 108-114, pls. cxvi-cxxv); there are also burials belonging to the same culture (pp. 115-118). The pottery is such as is found from Ararat to Tiflis, from Nakhichevan to Western Georgia, a rough ware, light brown burnt black outside (4-6),\* an early style with remarkable ornament of grooves and ridges making irregular meanders (1), and a light slip ware with dark brown decoration occurring in the top layer (2, 3), beside black ware with fine incised ornament, also some well-worked flints (7, 8).

Barrows in Tsalka belong to Early and Middle Bronze Ages. Forty-two in all were opened; we are given plans and sections of nos. IV (Early) and xxxvi (Middle) and section of x (Early), and many photographs of cleared interiors with objects *in situ* (pls. LXI-LXXII, CX-CXIII), but of half we have no information at all, and no full description of any.

To the Early Bronze Age (pp. 101-105, pls. CX-CXV *bis*) belong barrows IV, X, XIII, XIX, XXIV, XL; some, e.g. XL, are on the watershed between the Khram basin and lake (To)paravan; all have burial-pits below the old surface of the ground. In XL were a flat copper spear and dagger (14, 15), gold bands to go round a stick, perhaps a bow (20), and a haematite mace-head like the one from Alişar II (16); another such came from a plundered barrow Büyük Tumb (17). In the Khram valley were barrows mostly very poor in contents, just a pot or two such as 9, 10, 11, curiously like Hallstatt of a thousand years later, but handmade; note too a poker-like tang to an awl (12), and a silver curl (18). This all looks like the middle or end of the third millennium.

The Middle Bronze barrows, as they seem to be, raised very difficult questions: of seventeen barrows some particulars are given: nine, nos. I, VII, XV, XVI, XVII, XXII, XXV, XXIX, XXXIV, had burial pits; in eight, nos. V, VI, VIII, IX, XVIII, XXIII, XXVIII? XXXVI, there was no pit, the burial was on the old surface and in the last there was a great stone chamber. Presumably the others of both sorts had a wooden chamber with a mat on the floor. The two sorts occurred next each other. No human remains have survived, but some animal bones.

The pit-barrows ought to fit on to the pit-barrows of the Early Bronze, and the barrows with no pits come after, but this is not supported by the pottery. This falls into three main classes: class I is a kind of red ware, red body, red 'smear', apparently a thin unstable paint, and black decoration (21, 22, pls. LXXXI-LXXXIII, p. 80, f. 89); class II has red body, cream slip, polished surface and blacky-brown decoration (34, 35, pls. LXXVI-LXXX), with this goes a soft grey ware (33, pl. LXXV) with feather pattern; class III does not occur with either of the former; it is a dark brown coarse-textured ware with

\* The annexed sketches will give the reader some idea what the objects from the Chalcolithic to the Middle Bronze age are like, so that he may judge whether he need consult the book itself. They are only symbolic, not accurate, and of course mostly give no scale.



deeply incised pattern (45) and with it goes a red bodied ware with black burnished surface and a bold frieze of hollows and ridges (44). Class III seems the latest, and only occurs in no-pit barrows (VII on pl. LXXXV seems a misprint for VIII). Class I however also seems only to come in no-pit barrows, but class II is both in V, VI (no pit), XXXVI (stone chamber) and the pit barrows XVI, XVII. The last, much the richest of the barrows, has light slip pots (34, 35), special black burnished pots with fine comb ornament (31), pots with wart pattern (32) and curious jugs, both black polished and of thin grey clay (pl. LXXXIV, 1, 2, 4, 6). Some sorts of pots only occur in one barrow, e.g. (30) in XI, (46) in XXV and so are no help in comparative dating. The wares seem made on the wheel, but this is not clearly stated by the author (pp. 98, 102). Neither class I nor class II seems really like anything already known. They do not resemble the Kyzyl Vank ware which the author discusses in his introduction (pp. 7-9), and now divides into I, I *bis* and II. [See Spitsyn, *Bull. Com. Arch.* 29, 13-15, Przeworski, *Światowit*, xv (32-33) 23-64, Alekperov, *Sov. Archaeol.* 4, 249-263 (res. in *Am. J. Sem. Lang.* LVI, 172) giving the finest piece in colour from Shakhtakhty]. Kyzyl Vank seems to me to lead on to Iran, via L. Urmia (Stein, *Old Routes in Western Iran*, 1940, pl. XXII, Dinkha). Nor do these classes resemble ware from Tazakend (near Edjmiadzin, Przeworski l.c.), nor do they seem to me like the wares of the Euphrates or Habur region, and class I is not like the widespread red ware, nor is the soft grey ware like the known grey ware. If one must suggest analogies there is Shamiralti (W. A. v. Jenny, *Praeh. Zt.* 1928, XIX, 288 sqq), by Van and the new finds from Van and Alişar III (*Chicago Or. Inst. Com.*, II, p. 105, f. 149).

It is not a matter of just two more varieties of painted pottery; with the pots are associated astonishing work in gold, silver and bronze, arguing some progress in social organization, just as the very size of the barrows, all individual, not collective, interments, argues that certain men were placed far above their fellows. The metal-work that goes with class I is mostly rather plain, a gold cup (23) that suggests Meşkalamdug, and a silver cup to rank with it (24), but a truncated cone with affronted beasts and gold covering for sticks (25) making what Kuftin calls a 'standard', is more elaborate. These and a poker-tanged awl (28) suggest the middle of the third millennium; but the cup appears to be spun, not merely turned (if I understand aright, as is also a silver mug in B XVI, with class II pottery, pl. CII, 2) and the lovely bronze spearhead with a silver ferule (27, pl. CVI) points to at least 500 years later, recalling to me the weapons in the Borodino find, related to Troy VI. With those in B XV was a bronze tripod 8 ins. high, just like a miniature Scythic cauldron on a conical foot, but hammered, not cast, and with a pail handle (pl. LXXXVII).

Associated with class II pottery, light slip, brown paint, that reminds people quite vainly of Elam II, we have really astonishing metal-work, especially in barrows V and XVII. In B XVII the pit was 14 by 8.5 by 6 metres. It yielded a most surprising cup (36, 7 cm. high) bearing curls and friezes outlined in double filigree and set with carnelians and turquoises. The curls are like those on pot (35) but the general effect suggests to me Migration Period. With it was a silver bucket (38, 12.5 cm. high) with gold edge and margins, its surface all over animals like some Egyptian palettes or a seal from Brak. It is really a hunting scene from which the men have perished, as some deer are pierced with arrows (pl. xc, 1). There were also two pierced silver pins with gold heads set with carnelians and turquoise and with granulation as well as filigree (39), another such in B XXXVI. A similar work from B VIII is a necklace of big gold beads (40), its centrepiece a slider (*coulant*) of agate, pierced for the cord, mounted in gold and gems (41, 8.3 cm. across), almost exactly like one from Uruk (A. Nöldeke, etc. *Abh. d. preuss. Ak. d. W.* 1936, *Ph.-H. Kl.* 13, Brl. 1937, 23 f. 39) assigned to the middle of the third millennium.

It is a temptation to put the whole complex to this date, but the dagger-blade (37) is like the spearhead (27), and the companion barrow v inclines one to the later date, though again there is the silver beast (42), its eye treated with a shell-like insertion quite in the Sumerian manner (p. 96, f. 101). But the chief thing in barrow v was a silver cup (43, 14 cm. high). On the lower register nine stags and hinds troop round quietly: above 23, men bearing cups face a sitting figure, presumably a god, with a tree behind him, an altar, two beasts and a big cup before him. I could not get in six standing figures, but have drawn one larger to one side. These figures, as also the god, have the most extraordinary profiles; so have some Hittites, but unlike our author, I think these here must be wearing beast masks; that they all wear tails is decisive. The general look of their fur-edged coats, their trousers and turn-up boots is distinctly Hittite, and I think the rather simplified lotus below suggests the second rather than the third millennium. The absence of the horse points to the earlier date. One car was found, in B XXIX, but it was drawn by oxen; it was rather like cars from dynastic Ur (p. 97, f. 102-104) as are the gold twists (pl. CIX). The effective work in gold and silver does not perhaps require so much skill as one is inclined to think; these metals are easy to work, and most mineralized countries yield them when man first looks for them. Another case of gold work recalling patterns and shapes of painted pots is the treasure of Vülchi Trün in Bulgaria (Pârvan, *Getica*, pl. XI; *Bull. Inst. Arch. Bulg.*, 1925, III, 230).

In any case we have something remarkable, not in the least, I think, like the rich Kuban valley tombs such as Maikop, but rather related to Mitanni, Hurri and Hittites in the middle of the second millennium. The author discusses this question in his 'Conclusion' (pp. 123-132). But he mixes it up with linguistic considerations involving a knowledge of the peculiarities of different families of 'Japhetic' Caucasian languages, as well as the Asianic and 'Hittite' tongues, and therefore beyond my criticism.

What strikes me is that we have a civilization rich in gold in the Caucasian trough apparently not far removed in time or place from the Golden Fleece.

The first half of the book (to p. 77) is not so exciting. After the Middle Bronze we have cemeteries, not barrows. To the Later Bronze belong a few pit-graves near Baiburt (pp. 75-77, pl. LIV-LVIII) covered with slabs and set each in the middle of a circle of stones some 16 metres across. The pots are wheel-made of brown clay with black surface and a decoration of, as it were, strings stuck on in relief. A pin like an axe with an ajouré blade and a ram on the butt is vaguely like a Koban type but probably older (p. 77, f. 87, pl. LVIII 2).

Just at the transition to iron is a cemetery near Beshtasheni on the way to Safarkharaba on the Geryak Chai (pp. 65-74, pls. XXXVIII-LIII): it offers many analogies with the well-known Samt'savro cemetery and shows that things in it which were thought to be late and degenerate really precede the great period of Koban; a few things, axe, dagger, belt and belt clasp, do suggest Koban. Certain pots with geometrical figures and stylized animals, shaped like Chinese *Ku*, are interesting, likewise sickles, both compound with flint sawlets, and whole bronze. Sickles with saw-teeth are still used in the mountains.

In the Early Iron age, corresponding to the time when the Van kingdom flourished, say 850 to 600 B.C., we have cist-graves cemeteries at Kushchi, Maralyn Deresi, Tak Kilisi and Tsintqaro (pp. 50-65, pls. XIX-XXXVII). We may note a decorated belt like the famous ones from Kalakent and Koban, simple bowed fibulae, cowries, socketed forks, and two types of bit, one older with straight loose ψάλλια, one later with the bar curved and coalescing with rings and bits proper. Swords have the double splayed pommel found in Luristan. These things go on to the Median period (pp. 48-50, pl. XVII-XVIII).



They are followed by an early Achaemenian cemetery at Beshtasheni (pp. 41-47, pls. XIII-xvi) comparable to one at Dablagomi in Western Georgia, which included a hoard of Colchian coins; between them they throw light on the famous Kazbek treasure and cemetery c. 550 B.C. (cf. *ESA*, v, 108). A little later comes a mid-Achaemenian find made at another Tcintqaro on the Algeti, a more northerly tributary of the Kura and nearer to Tiflis (pp. 34-41, pls. VII-XII *bis*). Most attractive are two bronze 'phialae', shallow bowls with radiating petal pattern, and one in glass, gold plates for mouth and eyes and three legs of a lamp-stand of a type common to Etruria and Van, but not found in Greece; at the end of the period comes a cemetery at Neron Deresi with 'Graeco-Persian' pastes (pp. 30-34, pls. III-V). Both may be compared with the great Akhlagori treasure found on the Ksan just west of Mtskheta. The Hellenistic and Roman cemeteries (pp. 24-30, ff. 26-31) settle once and for all the date and origin in both North and South Caucasia of the oblong plaques with deer and other beasts in curious bulgy forms framed in spiral or rope patterns with lumps at the corners, one of which was actually claimed for Mongolia. The series ends in cemeteries dated by a coin of Augustus in a green glazed pot, and later by a coin of Kobad. To the early centuries of our era belong the rich finds recently made at Armazi, the ancient Harmozika (surely the H is an addition) the capital of Iberia near Mtskheta, but these do not concern this book, and particulars, save as to one Aramaic-Greek bilingual, are not yet to hand.

We should like to congratulate the author not only on his fine work in excavating, but on the completeness with which he has adduced the illustrative literature (546 references): he has well deserved the gold medal adjudged to him. The production of the volume with its excellent coloured plates does the greatest possible credit to the Press of the Georgian Academy of Sciences. The Georgian Summary enables one to fix the exact forms of the place-names; the English summary is a friendly gesture, but must be used with caution.

*Notes to prevent the more dangerous misunderstandings*

- p. 156, l. 19: remain irrefutable=have not until now been refuted.
- p. 159, l. 25: let in snaffles=snaffles put loosely through the check-bars, not fixed. *passim*, grounded=earth: l. 44, snaffles=check-bars.
- p. 161, l. 4: about the general gravitation . . . graves=their apparently, even the more recent of them, going far back in time, rather than coming down to the comparatively new culture of the oldest Trialeti cemeteries. Upholstery, *passim*,=mounting.
- p. 162, l. 15: piphoses=pithoi; l. 17, corona=rim; l. 30, cristate=comb; l. 32, soft, writing sherd=sherd soft enough to make a mark with.
- p. 163, l. 11: smock-frocks=kaftans or long coats.
- p. 165, l. 26: finishing=going back to.
- p. 166, l. 2: putty=paste; restoring=reducing.
- p. 168, l. 26: oval-shaped grain scraper=an oblong grinding-stone with a boat-shaped rider athwart it.
- p. 169, l. 38: the name Hurui has the same base as Urartu but has preserved the aspirate, the languages of the two countries are nearly akin.

The Editors regret that the following *errata* occur above  
(1) for check *read* cheek (twice); (2) for Hurui *read* Hurri.

# Native Settlements of Northumberland

by A. H. A. Hogg

TO most archaeologists Northumberland is noted chiefly for its remains of Roman military engineering, but the interest of these and the care with which they have been studied have diverted attention from the less spectacular relics of the native population. It is seldom realized that the county still contains traces of about 400 of their forts, farms, and villages, together with about 100 destroyed sites the positions of which are known more or less certainly from place-names or other sources. The purpose of this paper is to give some account of these settlements. They are of interest in themselves, but they are also potentially important as comparative material, especially in relation to the archaeology of Ireland, the South of Scotland, and Western England. They are generally in good preservation, and the fairly frequent occurrence of Roman relics provides a better prospect of establishing some sort of chronology than in more remote areas.

The records of previous work show how little has been done.\* Explorers have no doubt been discouraged by the paucity of relics, but this is itself partly due to the lack of excavation. Only one site (9), and that a very small one, has been completely examined, and it is probable that all the labour ever expended on native sites in Northumberland does not much exceed that devoted each year to the examination of prehistoric remains in such areas as Sussex or Wiltshire. It may not be out of place here to suggest that the sites are of a type particularly well suited to investigation by small parties of volunteers, including of course an experienced excavator, but employing no hired labour. There is no lack of sites awaiting excavation, and it is hoped that this article may attract more workers to these remains. The views here put forward are tentative only, and must be regarded as subject to considerable revision in the light of future investigation.

The writer is greatly indebted to Mr I. A. Richmond for his kindness in reading the draft of this paper, and for valuable criticisms and suggestions, and to Dr W. Fisher Cassie and Miss N. Henderson for help with the surveys.

## THE NATIVE CULTURE IN NORTHUMBERLAND

It is convenient to discuss the native culture without reference to chronology or to the different types of structure which occur in the area. The resulting picture can be regarded as representing the state of the majority of the inhabitants during the Roman period, but the apparent uniformity may well be due merely to lack of excavation.

What is now Northumberland seems to have formed the southern part of the territory of the Votadini, a tribe whose main centre was near the estuary of the Forth. Traprain Law, if not actually their 'capital', must have been one of their most important towns, and some idea of their culture in its most advanced form can be derived from the excavation reports relating to that site (11).

The Northumbrian area, however, was far less prosperous. The main occupation of the inhabitants was the breeding of cattle, their herds being mostly of a type of small

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\* A revised list of sites, with bibliography, will shortly be published elsewhere.



## NATIVE SETTLEMENTS OF NORTHUMBERLAND

ox. Sheep were also kept but they were not so numerous. The excavations at Corbridge (12) give a ratio of seven oxen to one sheep and the remains found at Gunnar Peak (4) agree well with this. The horse was also domesticated but was not very common. The food supply may have been supplemented by hunting, but traces of animals other than ox and sheep are scarce.

The only evidence for agriculture is the presence of rotary and saddle querns. A few of these occur in almost every settlement, but their number is not sufficiently great to suggest extensive cultivation and there is no satisfactory evidence at present for early field-systems. The cultivation-terraces which are such a striking feature of the Cheviots seem everywhere to be later than the native sites, and the small irregular stone-walled enclosures which sometimes occur, and which show some resemblance to the Celtic fields of Southern England, are generally associated with the sites of what are probably medieval farms.

Spindle whorls are sometimes found, but they are so uncommon in this district that it seems unlikely that the thread produced would be sufficient for weaving, although some evidence for the manufacture of textiles was found at Traprain Law. Carts were used in this area, as the iron band for a wheel-hub was found at Gunnar Peak (4). Pottery, although plentiful at Traprain Law, is rare on Northumbrian sites. The native ware is extremely coarse, resembling that of the late Bronze Age cinerary urns, but much inferior in quality (10). It varies from  $\frac{1}{2}$  to one inch in thickness and it is not uncommon to find 'grits' an inch across in the ware. The types in use included large bucket-shaped pots and roughly hemispherical bowls with either simple roll or flat rims, but very little material is available. The cultural and chronological implications of this material will be discussed later. Roman pottery, generally of the second century, is also found, and when this was available the native ware seems to have been less used. Frequently no pottery at all is found on a site, and indeed few relics of any kind. Much of the equipment used must have been of wood. Rough stone discs of various sizes were probably used as covers both for pots and for wooden tubs.

Personal ornaments are uncommon. Brooches (4, 9) of types manufactured at Traprain Law and elsewhere are sometimes found and fragments of glass armlets (2, 9) also occur. At Yevering Bell (2) armlets of a rounded triangular section were found, said to be of 'oak', but probably of lignite.

Apart from cattle rearing and agriculture there is little evidence for any activity which could form a basis for commerce. The large number of quern stones found at Farhill Crag (8, p. 137,  $55^{\circ} 36' 05''$  N;  $1^{\circ} 47' 45''$  W) suggests that there was a factory there. It seems reasonable to suppose also that iron-working was carried on in the area as iron tools are fairly common, but direct evidence for this is unsatisfactory. Isolated lumps of 'slag' have been recorded from three sites, but the only specimen analysed proved to be natural (4), being derived from the Whin Sill.

### TYPES OF SETTLEMENT

Before discussing the distribution of the settlements it will be convenient to describe briefly the types into which they may be divided. This classification is preliminary only, and the identification of the types on the distribution map is based largely on the 6-inch to the mile Ordnance Survey, so that some revision may become necessary as a result of further field work.

Some curvilinear sites appear irregular on the 6-inch map, and cannot be fitted into any particular group without a detailed survey. These are shown on the distribution-map as Unclassified Curvilinear sites.

## ANTIQUITY

It seems likely that the main basis of the classification is sound, in particular the distinction between rectilinear and curvilinear sites, but further investigation will almost certainly enable sub-groups to be identified within those discussed here. Some indication will be given below of the probable nature of these sub-groups.

There does not seem to be any significance in the material of which the ramparts are constructed. This is sometimes stone, sometimes earth with a stone revetment, sometimes apparently earth only, and it is probable that the material used depends only on what is available in the neighbourhood. Similarly the presence or absence of ditches depends largely on the ease with which the ground can be excavated.

### CLASSIFICATION

**CONTOUR AND HILL FORTS.** These are not common in the area and the smaller sites may perhaps be more nearly related to the multiple ring forts. Only Yevering Bell (13 acres) has any claim to be considered a 'town', as no other site exceeds 6 acres in internal area.

**RING FORTS AND SMALL ENCLOSURES.** This group includes remains of very diverse types. The most impressive are the 'multiple ring forts' in which a small central area, seldom of more than 2 acres, is surrounded by two or three strong ramparts. The plan is usually circular but the builders did not hesitate to adapt their fortifications to some extent to the shape of the ground, and oval forts of an obviously related type occur. These are not distinguished on the distribution-map. Without field work and excavation it is impossible to say whether the differences, between oval, circular, and nearly circular plans, are of any significance. The entrances, however, may give more information of chronological value. They are of two types, but information as to their relative distribution must also await further field work. The simplest is a straight passage leading through the ramparts, but a more interesting type is that in which it is necessary to make a double right angle turn to enter. In Northumberland the turn is usually first right then left, but the other direction also occurs. Some of the forts have two entrances.

A multiple ring fort is here illustrated by the plan of Greaves Ash (FIG. 1) which shows a zig-zag entrance of the type described. Attention may also be drawn to the double facing which appears in the inner dry stone wall, a method of construction not uncommon in the area. From other points of view the plan is not wholly typical as the great number of hut sites is unusual, but it was selected deliberately as an illustration of the spread of a settlement beyond its original limits. The more usual arrangement where huts are visible is to find a relatively small number distributed round the central space close to the rampart.

The single ramparted enclosures range from large fortified sites related to the multiple ring forts to small unfortified farmsteads. From their appearance on the 6-inch map it is not possible to classify them accurately, and some of the single rings should probably be shown on the map as small enclosures. Hartside Hill (FIG. 1) may be considered typical, and Mr Richmond has recently shown (13) how the description of St. Cuthbert's hermitage on Farne Island would apply to many of these small farmsteads in the Cheviots. An enclosure of rather unusual type is that at Ingram Hill (FIG. 1) where the huts are rectangular and mostly attached to the enclosing wall. Excavation showed that this site was preceded by one enclosed within a wooden palisade (10).

**RELATED SITES.** As mentioned above, the builders of the multiple ring forts did not adhere slavishly to the circular form, and when a promontory or cliff could aid defence the form of the work was modified. The ramparts are often sufficiently distinctive to



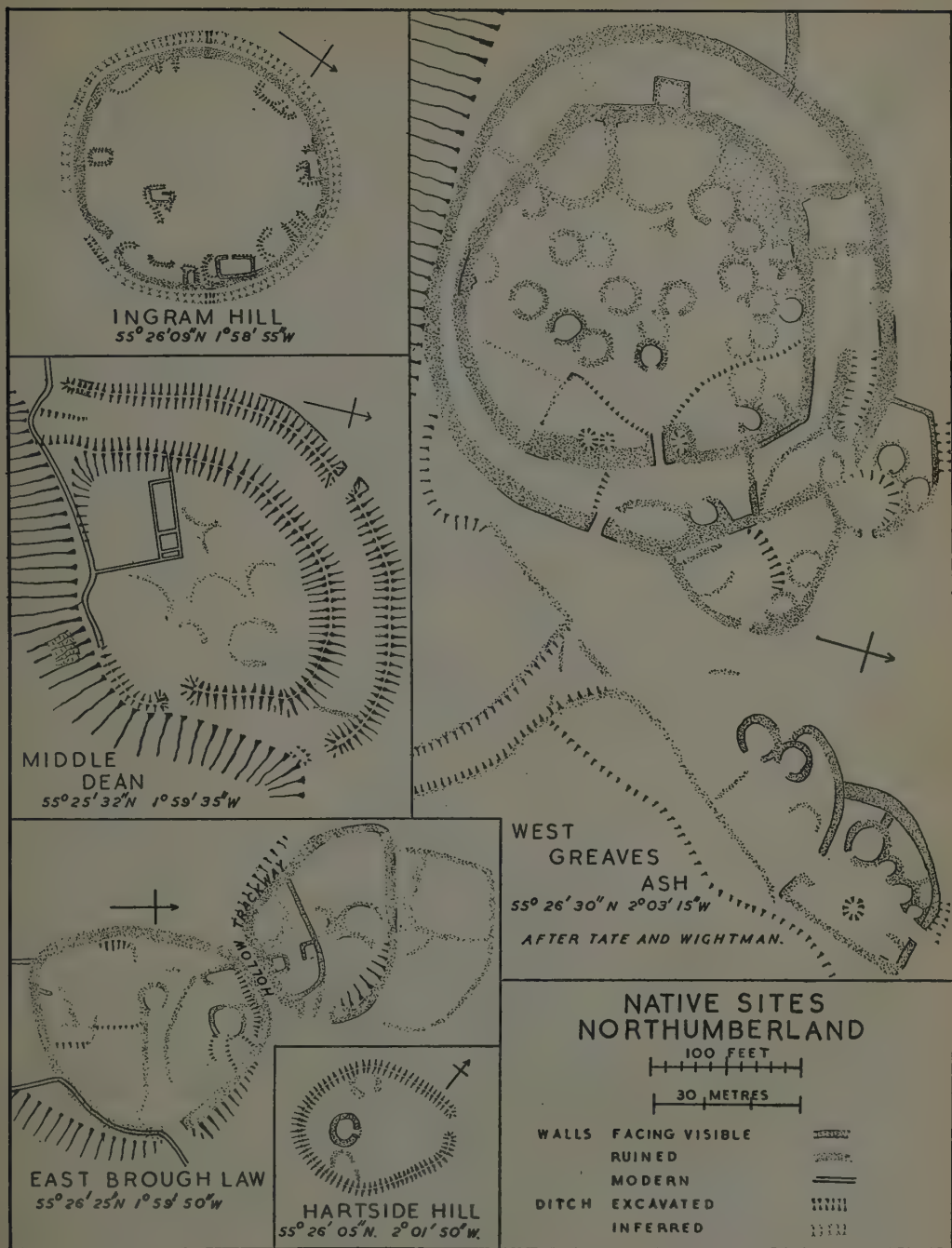


FIG. 1

indicate the connexion. Middle Dean (FIG. 1) represents a site of this type. It has a zig-zag entrance and two ramparts of earth with stone revetting, with a level area between. It seems probable that the wide space between the ramparts was intended to enclose cattle, which would provide an additional protection against attack. The way in which cattle could assist the defence is indicated by the following quotation from a modern African source (14)—'When night came we made a double *boma* of thorns: Bwana Y and the rest of us in the middle and a mass of cattle outside so that the Lumbwa could not rush us in the dark. The Lumbwa tried to get at us once in the dark; they put their shields on the thorns of the fence and got among the cattle, but a sentry saw them and fired, the cattle stampeded and knocked over the Lumbwa and they did not attack again'.

RECTILINEAR SITES (FIG. 2). This class again contains a number of different sub-groups, ranging from the relatively large and strongly embanked works such as North Catcherside to simple enclosures such as Gunnar Peak or Milking Gap. So far as the present evidence goes, however, the sites seem generally to belong to about the same period and culture. The significance of the different strengths and sizes will not become clear without further research. Some of the earthworks classified under this heading may be Roman and others may be medieval, but it is probable that most are native.

The largest type is represented by North Catcherside. The interior of this site has been ploughed and no huts remain, but the evidence of other enclosures such as Quarry House, Thockrington (5), suggests that the usual arrangement consisted of a straight track leading from the entrance across the enclosure with a row of circular huts on either side. At Quarry House the surrounding area is flat and marshy and North Catcherside is situated at the end of a low ridge with a marshy valley on either side. The entrance is towards the end of the ridge.

Some of the small rectangular sites are also relatively strongly walled, as at West Corbie Crag, which may be compared in everything except its shape and the size of its ramparts with the small enclosure on Hartside Hill, but most have only a slight wall. There is a fairly continuous gradation from the almost perfectly rectangular plan, through irregular sites such as Milking Gap, to the curvilinear enclosure, but the intermediate types of plan are not common and most of the works can be assigned with certainty to one group or the other.

VILLAGES. A few villages show signs of deliberate planning, such as the rectilinear site of Tower Tye (FIG. 2). But most are irregular collections of small egg-shaped enclosures and huts. They are not as common as the more regular walled sites and occur usually near the multiple ring forts. East Brough Law (FIG. 1) is an example. This and two or three other similar villages seem to be associated with the strong fort of Brough Law ( $55^{\circ} 26' 28''$  N,  $2^{\circ} 00' 08''$  W) nearby and there is a similar grouping round Middle Dean. Villages are most frequent in the Cheviot foot-hills.

ISOLATED HUTS. Isolated huts do occur, but the recorded examples are not numerous and have not been marked on the map. Their rarity is probably due to their inconspicuousness in the field and the ease with which they can be destroyed.

HOUSE TYPES (FIG. 3). The excavated houses are not sufficiently numerous to permit detailed classification. Almost every site excavated has produced a different type. They frequently contain a pivot-stone for the door and small extensions arranged to screen the entrance have been noted on several sites.

The most usual form is the simple circular hut sometimes with an internal partition as in the example from Gunnar Peak. Another common type is that formed by a ring of palisading. Examples of this have been noted at Witchy Neuk, at Gunnar Peak, and perhaps at Ingram Hill, and traces are still visible on the surface at Brough Law.



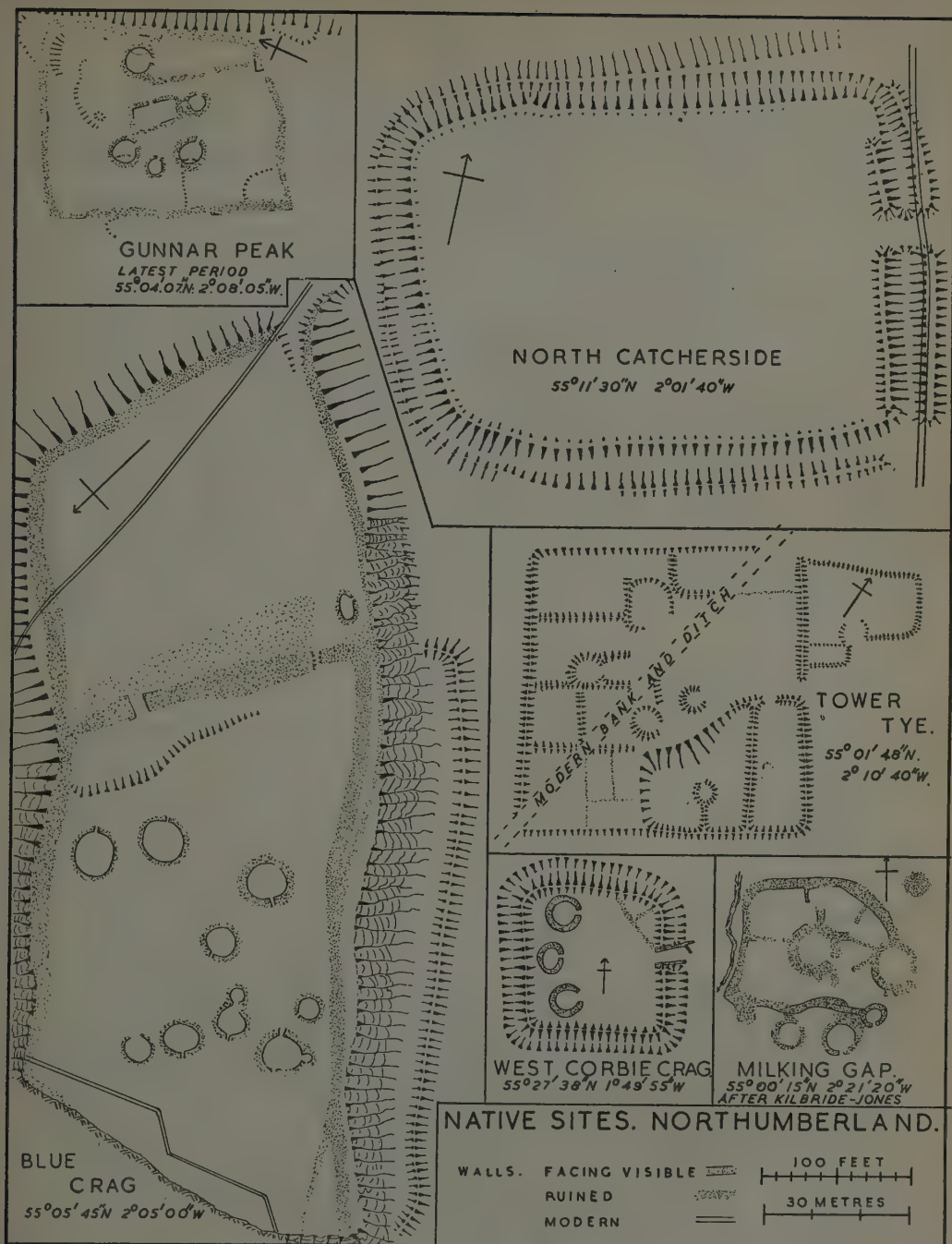


FIG. 2

## ANTIQUITY

No plans are given here as none is available on a sufficiently large scale. Milking Gap produced examples of an interesting type of hut which does not seem yet to have been paralleled on other sites. All the houses there showed a similar arrangement of posts; that illustrated had also a rough drain formed by a circular trench filled with rubble beneath the hut floor.

Rectangular huts which can be definitely assigned to the native culture are not common. At Gunnar Peak a single rectangular building was associated with the circular houses and seems to have formed part of a complex house containing three rooms, one circular.

A similar but smaller house of two rooms was excavated at the curious site of Ingram Hill. It seems to have had a pent-house roof supported by two posts only. The stonework of the walls can never have been of great height but the walling seems to have

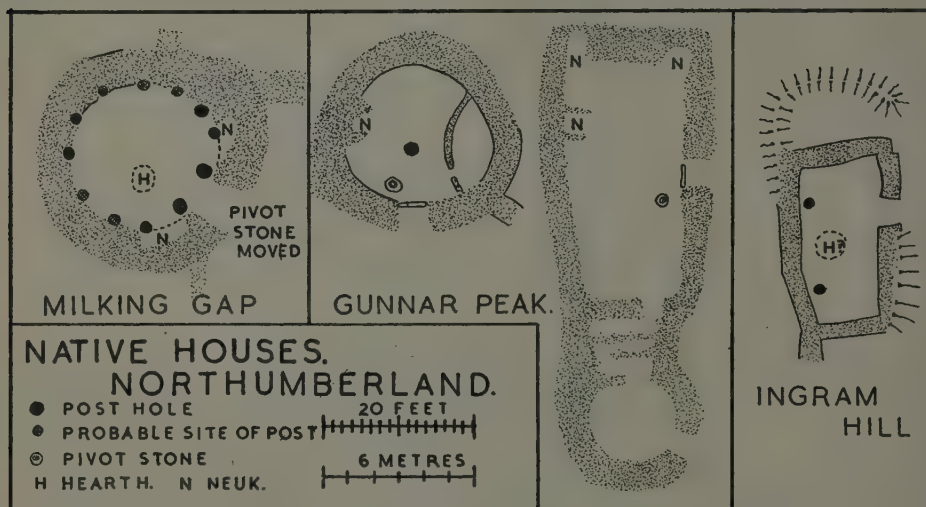


FIG. 3

been completed with earth. No pivot-stone was found in this house and no relics of occupation.

**ASSOCIATED LARGE ENCLOSURES.** Although no indications are known of early cultivation, some of the multiple ring forts have associated with them extensive systems of enclosures, presumably of use in connexion with cattle keeping. Lordenshaws Camp\* ( $55^{\circ} 17' 15''$  N,  $1^{\circ} 54' 50''$  W), and the Ringses, Doddington Moor ( $55^{\circ} 35' 20''$  N,  $1^{\circ} 58' 40''$  W), show these features. The character of these enclosures is very similar to those at Y Bwlwarcu (15) in Glamorganshire. Details of the layout differ in each case. Slightly hollowed roads, often deliberately revetted with stone, are associated with these and other sites.

**BURIALS.** Small cairns are associated with many sites. Few have been excavated and only that at Gunnar Peak has produced human remains, but the survival of bone is unlikely in the acid soils usual in the area, and it seems fairly certain that these cairns

\* See vol. xv, *Northumberland County History*.

## NATIVE SETTLEMENTS OF NORTHUMBERLAND

were in fact the burial places of the inhabitants of the adjacent settlements. They may be compared with those in the cairn cemeteries recently excavated at Hirwaun in Glamorganshire (16). But no 'scoop graves' have yet been noted, and the cairns seem seldom to be grouped in cemeteries. These small mounds are very plentiful on the high ground near Brough Law and Middle Dean, but search will reveal them near almost any native site, and even scattered over the high moorland far from any traces of occupation.

DISTRIBUTION (Map, FIG. 4). The map is intended to show the general distribution of settlements, rather than that of individual types. The most striking feature is the way in which the South Tyne forms a boundary to the distribution of the sites. The change is so definite and abrupt that there seems strong reason to suppose that the river actually formed the southern boundary of the Votadini.

The map also shows that the upper parts of small river valleys were favoured areas for settlement, and the concentrated occupation of the area round Yevering Bell stands out clearly. How far the occupation extended over the lower ground is not certain, as cultivation has been intensive, but the distribution of 'chester' place-names suggests that many other sites must have been destroyed, leaving not even that evidence for their existence.

In the other direction, the high moorland, above the 1000 foot-contour, was almost uninhabited, but must have been used extensively for grazing.

A third point brought out by the map is the limited distribution of the rectilinear earthworks.\* It will be seen that they are almost confined to the southern part of the county. A possible explanation of this is discussed below, when dealing with cultural relationships outside Northumberland.

### CULTURAL CONNEXIONS OUTSIDE NORTHUMBERLAND

Some of the settlement types found in the district are not sufficiently distinctive to justify an attempt to find parallels elsewhere, but three deserve further discussion.

SMALL ENCLOSURES. The small oval enclosure or isolated farmstead seems to be less common and widely distributed than would be expected in view of its simplicity. The unimpressive character of the remains may have caused them to escape notice but their apparent rarity renders one possible parallel interesting. The general arrangement and the dimensions of the late Bronze Age enclosures on Plumpton Plain (17) show considerable similarity to the Northumbrian farmsteads. This may be accidental, but in view of the character of the culture associated with the Northumbrian sites it is probably significant. Some of the undecorated pottery from Plumpton Plain shows a strong resemblance to the ware found in Northumberland, but no early cultivations are recorded in the North.

RECTILINEAR EARTHWORKS. These raise a more difficult question. They show a striking resemblance to the *viereckschanzen* (18) of the district around the upper Rhine and its tributaries. This alone would not necessarily be significant, as rectilinear sites might reasonably be expected in any area subject to Roman influence. But other evidence also points to a connexion. It may be summarized as follows.

About A.D. 140, settlers were transferred from Britain to the Rhaetian frontier, near the sources of the Rhine and Danube. The evidence of brooches suggests that they came from the Votadinian area (19), although it does not exclude districts further north

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\* This is commented on in vol. xv of the *Northumberland County History*, in the article on the Prehistory of the area.



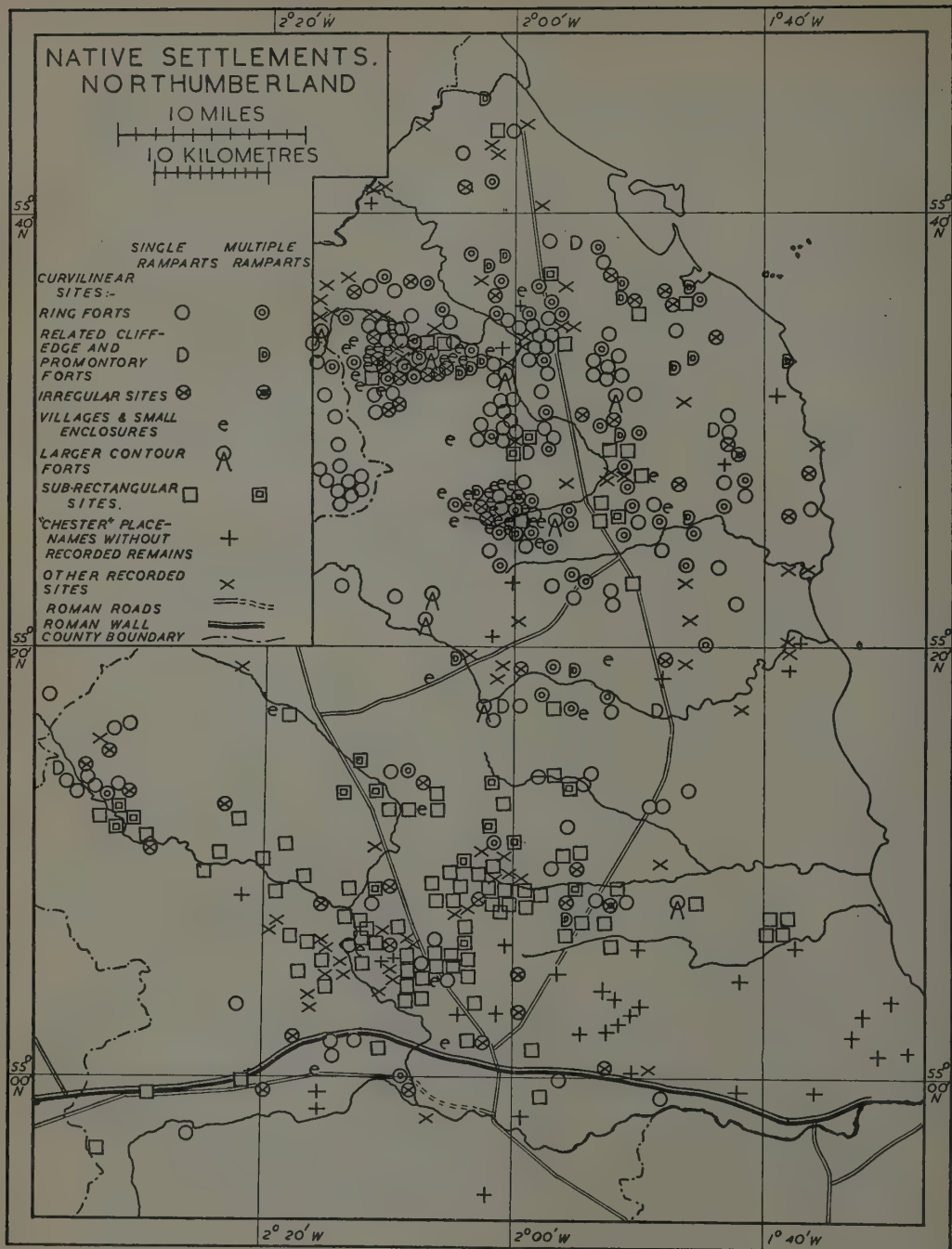


FIG. 4

## NATIVE SETTLEMENTS OF NORTHUMBERLAND

and west. This transfer is probably to be associated with the reorganization of the frontier under Lollius Urbicus, involving the construction of the Antonine Wall.

Rhaetian pikemen—*Raeti gaesati*—have left epigraphic evidence for their presence (c. A.D. 160), at or near Aesica (20), Risingham (early 3rd century), and Jedburgh (21).

The *viereckschanzen* occur in an area which includes at least part of Rhaetia. Their full distribution is unknown. They appear to date from the 1st or 2nd century B.C. to the 1st century A.D.

The Northumbrian rectilinear sites are most numerous in a limited area between the North Tyne and the upper Pont, although outlying examples occur elsewhere. This limited distribution must surely imply that the majority of the earthworks can be referred to some particular group of settlers. And it seems noteworthy also that this area could be controlled by the garrison at Risingham. The slender evidence available suggests a date in the middle of the 2nd century for the Northumbrian sites.

Considered singly, none of these items is of much account. And together they provide evidence which falls far short of that required for proof. But it is justifiable to suggest a tentative hypothesis. It seems probable that the British settlers on the Rhaetian frontier were transferred from the area north of Hadrian's Wall. In this connexion the scattered human remains found at Gunnar Peak in associations earlier than the rectilinear enclosure may be mentioned. The cleared area may then have been resettled with Rhaetians and others from the area within which *viereckschanzen* occur. Such a settlement would provide a compact body of men who for their own safety would probably support the Roman power, as it seems unlikely that they would be on friendly terms with the natives.

This transfer of population would, on this hypothesis, have taken place about A.D. 140–150. At this time, the area north of Hadrian's Wall was well within Roman territory. But from A.D. 155 onwards various disturbances threatened the safety of the frontier districts. It seems reasonable to associate with these dangers the appearance of the *Raeti Gaesati*, who can be regarded as a body of irregulars raised from among the alien settlers to meet the new dangers which threatened their farms and villages. Such irregulars would naturally be under Roman military control, and would not necessarily operate only in the actual area covered by their settlements.

It must be emphasized that this is merely a tentative hypothesis. The evidence in its favour is slight and circumstantial. It must be admitted also that apart from the earthworks themselves no object has been found which shows any connexion with the upper Rhine, although this objection loses weight when the scarcity of objects of any kind from these sites is realized.

But this group of sites can be explained with almost equal plausibility as representing the resettlement by the *Votadini* themselves of an area cleared in connexion with some phase of Roman frontier policy, the rectilinear form of the sites being due to Roman influence. In any case some of the rectilinear sites must probably be assigned to this last cause. And sub-rectangular enclosures dating from the Bronze Age occur in Wessex (22).

How much truth is contained in either of these hypotheses can only be decided by further extensive excavation and field-work, the necessity for which is again emphasized by the uncertainty surrounding this question.

**MULTIPLE RING FORTS.** These are probably the most interesting of the types found in Northumberland. They deserve extensive and detailed study, but can only be discussed briefly here. Their plan is very distinctive and they have a curiously limited distribution which has not been fully worked out. In Great Britain they seem to occur

## ANTIQUITY

only in Cornwall, in a belt near the Scottish border, and occasionally in Pembrokeshire. In Ireland however they are extremely numerous. Leeds derives Chun Castle (23), a typical Cornish example,\* from the *Citánias* of northwest Spain, but these latter are much larger sites.

DATE. In discussing the date of the sites it will be convenient to start with the evidence for occupation during the Roman period. This is not plentiful. Milking Gap (9) is the only site the occupation of which can be assigned to a definite time interval (A.D. 120-180). Roman fragments (2nd century) have also been found at Gunnar Peak (4) Quarry House (5) (Samian ware), Witchy Neuk (8) (3rd century), and Carry House (3). The rectangular house-plan may probably also be attributed to Roman influence.

For earlier periods evidence from relics is almost absent, but at Yevinger Bell (2) the excavators found fragments of bracelets, said to be of oak but probably of fossil wood, with a rounded triangular section. This is a rare type and similar bracelets from other sites are discussed by Hencken (24) and are shown to belong to a late Bronze Age culture associated also with pottery apparently related to that from Northumberland. Their absolute date is unknown. There is further evidence for a prolonged occupation of many sites in the remains themselves. Two or three periods of construction are often visible.

The multiple ring forts have not been dated in this area. If the typology suggested by Cornish and Irish examples is any guide the zig-zag entrance should be early, as it is found at Chun (3rd-2nd century B.C.), but the ring fort type had a long life. Garranes (25) belonged to the 5th century and Cahercommaun (26) appears to be a related structure of the 9th century.

## CONCLUSIONS

It is dangerous to generalize about the tangle of cultures which covers the western and northern parts of these islands. Structures such as the multiple ring forts, the earth-houses, and the courtyard houses, to name only a few, usurp by their numerical superiority the place taken by pottery and small objects in the south. A distinctive type of structure is as much a cultural element as a type of pot, and if sufficiently numerous can provide as much information concerning chronology or population movements. Until a detailed analysis of each individual type has been undertaken attempts at a general synthesis are premature, but it seems likely that the approximate coincidence of the distribution of multiple ring forts and flat-rimmed pottery with the area which was little influenced by the Iron Age cultures (27) is significant.

As several writers have suggested, in this area the culture of the Late Bronze Age may have survived up to Roman times and later. There seems no need to postulate any Iron Age invasion to account for the bulk of the pottery and other relics, but it is reasonably certain that further work will make it possible to distinguish various groups within the 'late Bronze Age survival' area. But to attempt such a study would be outside the scope of this paper.

## EXCAVATION REPORTS

- 1 GREAVES ASH, 55° 26' 30" N, 2° 03' 15" W. *Berwicks. N.C.* 1856-62, pp. 294-316.
- 2 YEVERING BELL, 55° 33' 30" N, 2° 06' 50" W. *Berwicks. N.C.* 1856-62, pp. 431-53.
- 3 CARRY HOUSE, 55° 06' 25" N, 2° 12' 20" W. *Arch.*, 1880, XLV, 355-74.

\* The sub-rectangular enclosures which form such a striking feature of the interior in all published plans were shown in the second report to be secondary. The original habitations were simple round huts.



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- 4 GUNNAR PEAK, 55° 04' 07" N, 2° 08' 05" W. *A. Ael.* 1885, ser. 2, x, 12-37; 1942 ser. 4, xx, 155-73.
- 5 QUARRY HOUSE, 55° 06' 38" N, 2° 03' 10" W. *A. Ael.* 1887, ser. 2, xii, 155. *PSANewcas*, 1887, ser. 2, ii, 337. (Samian found).
- 6 BLUE CRAG, 55° 05' 45" N, 2° 05' 00" W. *PSANewcas*, 1925, ser. 4, ii, 23-24; 138-43.
- 7 OLD BEWICK, 55° 29' 15" N, 1° 52' 50" W. *PSANewcas*, 1934, ser. 4, vi, 252-6.
- 8 WITCHY NEUK, 55° 17' 17" N, 2° 01' 45" W. *A. Ael.* 1939, ser. 4, xvi, 129-39.
- 9 MILKING GAP, 55° 00' 15" N, 2° 21' 20" W. *A. Ael.* 1938, ser. 4, xv, 303-50.
- 10 INGRAM HILL, 55° 26' 09" N, 1° 58' 56" W. *A. Ael.* 1942, ser. 4, xx, 110-33. Including a report on the native pottery.

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- 13 ANTIQUITY, 1941, xv, 88.
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- 15 ANTIQUITY, 1934, viii, 395-413.
- 16 *Arch. Cambs.*, 1942, pp. 77-92.
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- 21 *Northumberland County History*, xv, 96, 135.
- 22 *Proc. Preh. Soc.*, 1942, viii, 48-61.
- 23 *Archaeologia*, 1927, LXXVI, 205-40; 1931, LXXXI, 33-42.
- 24 *Proc. R. Irish Acad.*, 1942, XLVII, sect. C, no. 1
- 25 *Proc. R. Irish Acad.*, 1942, XLVII, sect. C, no. 2.
- 26 *Roy. Soc. Antiquaries. Ireland*, 1938, extra vol.
- 27 Fox, *Personality of Britain* (3rd ed.) figs. 5, 11a, 11b; Childe, *Preh. Comm.*, fig. 83.

# The Domestic Goose

by W. H. RIDDELL

WHEN, WHERE and How the Wild Goose was first domesticated are questions which offer a wide field for speculation and an interesting subject, should the opportunity occur, for archaeological research. Our present tame geese differ, generally speaking, in so small a degree from their wild congeners that we hardly need Darwin's authority to assure us that they are all descended from the Grey-Lag goose *Anser anser* (Linnaeus). The very small change they have suffered under domestication, which is rarely more than an increase in size, a diminution in the warmth and intensity of their coloration, and a tendency, partial or complete, towards albinism, would suggest that the domestication of the goose took place at a comparatively recent date. The most cursory examination of the available evidence shows this opinion to be untenable. For example it is probable that, when in 390 B.C. the tame geese in the Roman Capitol saved a critical situation by being more wakeful than the men on guard, their establishment there was already an ancient institution and that they either possessed then, or else acquired by this salutary action of theirs, a semi-sacred character. Contrary to expectation the Romans attributed a particular sanctity to those geese which were white. The white feather had not then the significance it has now. Game-cocks, on whom it was later considered a stigma of cowardice, were at that time hardly known in Europe so far west as Rome, although these Indian birds—descendants of the wild Jungle-Fowl—reached Greece through Persia at least as early as the 6th century B.C. They occur with some frequency on Greek vases. Upon an amphora in the British Museum attributed to the 6th century a large and unmistakable Game-cock appears, while two others figure on the shoulder of an amphora by Nicosthenes (late 5th century) in the same collection. In Plato's day moreover a cock was considered a suitable sacrifice to Asclepios ; but to inquire why would make this digression too long.

Of all the species of Grey geese, the Grey-Lag has the most southerly nesting-range and the widest. Unlike its palaearctic congeners, the White-fronted goose *A. albifrons albifrons* (Scopoli), the Lesser White-fronted goose *A. erythropus* (Linnaeus), the Bean-goose *A. fabalis fabalis* (Latham), and the Pink-footed goose *A. brachyrhynchus* (Baillon), it rarely crosses the Arctic Circle. Otherwise the breeding range of the Grey-Lag includes Iceland, northwest Scotland, all continental Europe north and east of a line from Denmark, through Germany, Austria and Hungary to Roumania and Macedonia ; thence across Russia to the Caucasus, and from there across the whole of northern Asia to Kamchatka. As a considerable extent of this range overlaps districts where tame geese abound—such as north Germany for instance—a certain amount of cross-breeding between wild and tame birds has probably taken place from time to time. This would help to account for the small difference observable between wild and tame forms.

Comte de Buffon informs us, with what truth I know not, that the Cossacks of the Don basin were wont to allow their tame geese to go off during the summer to nest in the northern marshes,—these birds returning home with their progeny in the autumn each one to its respective owner. Under such conditions the possibilities of crossing between wild and tame birds is clearly considerable.

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With so extensive a breeding range the locality *where* the Wild Goose was first domesticated admits a very wide solution. The probability is that it happened, as we shall see later, in many more places than one and in each place independently of any other.

Coming to the question *when* the domestication of the goose first took place we are on more difficult ground. We find ourselves in fact in that uncomfortable region of 'guessing' which is anathema—and rightly so—to the modern scientific inquirer. It is quite possible, though as yet unproved, that ultimately we may have to put the date of the goose's domestication as far back as neolithic times. Definite proof of this will however be difficult to find. In early days the bones of tame geese would differ so little from those of wild ones that no palaeontologist could venture to differentiate one from the other. The discovery of a neolithic hearth or midden, rich in the bones of geese, would be no proof of this bird's domestication unless we could be sure at what season of the year they were deposited. For example, if in Scandinavia—say—a neolithic hearth or midden (or part of one) which contained goosebones could be definitely assigned to a winter season, this would be a proof that such bones belonged to tame geese, because at that season all the wild Grey-Lags of that country would be wintering, as they do today, in the latitude of the Mediterranean. Whereas if it could be assigned to a summer season the bones would quite possibly be those of wild birds, that being the season when they are most easily caught (see page 150). To date any part of a hearth or midden with such exactitude as this is however so unlikely a contingency that we had best seek assistance from evidence less nebulous and insecure.

By the evidence of language we know that the goose was a familiar bird to that shadowy people or peoples amongst whom the Aryan tongue originated. The Aryan root 'Zhans' or 'Ghans' is the basis from which the name for 'goose' in all Indo-European languages derives. Thus from the root 'Ghans'—a word which is plainly an onomatopoeic rendering of the wild goose's clarion call—comes our word 'gander', the Latin 'Anser', and through a wider phonetic change our word 'goose' also.\* But because our word 'goose' comes from an ancient Aryan root it would be a serious error to assume that the men who spoke the Aryan tongue, whoever they were and wherever they lived, were responsible for this bird's domestication. Words like our 'buck', 'beaver' and 'otter' also derive from Aryan roots, but no one will thereupon conclude that these ancient peoples domesticated these animals any more than they did wolves, although another Aryan root indicates that they were equally familiar with these latter beasts. All that we have a right to assume is that the Aryans *may* have domesticated the goose, because, from the point of view of utility, they had a better reason to do so than they had for taming otters, beavers or wolves. The last-named may indeed have already been tamed; in fact undoubtedly was so, if only we could be sure that all our breeds of dogs descend direct from the wolf, as many expert dog-fanciers believe. The ancient Aryans, however, had already differentiated between dog and wolf by giving a separate name to each; furthermore the elliptical (cat-like) pupils of all wolves' eyes, and the invariably circular pupils of all dogs' eyes, has always seemed to me an insuperable difficulty in the way of their ancestral relationship. But the solution of this puzzling problem is fortunately no present concern of ours.

The earliest domestication of animals had much the same purpose as that of the present-day shooting-estate proprietor. Its object was the preservation of game. While

\* Is it only coincidence that the Chinese name for a Wild Goose, which in modern mandarin is pronounced 'yen', is still pronounced 'Ngen' or 'Gan' in south China; the latter pronunciation being preserved in the Sino-Japanese 'gan'. The origin of its sound, like the Aryan 'Ghans', was probably also onomatopoeic.



man was still in the hunting stage of civilization the time came when for one reason or another the stock of wild game began to dwindle so rapidly that a skilled hunter's exertions were unequal to keeping the larder supplied. The more intelligent among them therefore resorted to capturing alive, and breeding in captivity, the game which formerly they had hunted in a wild state in order to have a supply of meat ready at hand. Thus more or less indiscriminately the domestication of animals began. Nevertheless we may lay it down as a general rule, if not as an axiom, that these primitive stock-owners and breeders ultimately retained in a state of domesticity only those animals that proved to be as much use to them living as they were dead, and at the same time were capable of perpetuating their species in captivity, and of picking up a living without too great a tax upon their owner's care and labour. Frequently indeed their domestic animals served more than one 'living' purpose, as the curious may discern by contemplating the various uses—porterage, traction and so on, to which man has put horses, donkeys, cattle, sheep, goats, camels, reindeer, and llamas, apart from the advantages derived from their milk, hair or wool while alive and from their meat and hides when dead. In passing we may note that they had little or no use for a dead dog unless, like the American Indians or the Chinese, they ate him.

The goose, apart from the value of its eggs for food—a doubtful benefit in early days\*—comes into the category of domestic animals, which were as much use to primitive man living as dead, for the following reason. In the neolithic age the bow had become one of man's principal weapons. In eastern Spain indeed there is evidence from cave-drawings, in particular at Saltadora near Castellón, that the bow was well-known in late palaeolithic days and that the arrow was apparently already furnished with feathers. The quills of a goose—the big primaries of its wings—which can be either cut or pulled out without serious detriment to the living bird, furnish the best possible feathers for the fletching of arrows, and no other quills so stiff, strong and durable are more readily obtainable in the considerable quantities required: this last condition applying as much to the wild as to the tame goose. Quill feathers of equal value for arrows are grown by eagles and vultures, to name no others, but all such birds suffer from the disability of moulting with extreme deliberation, only a single pair of feathers, one from each wing, being as a rule shed at a time. Consequently the moulted feathers are widely scattered and difficult, if not impossible, to find in sufficient quantities. The Wild Goose, on the other hand, performs the process of moulting while on its nesting grounds and with extreme rapidity; shedding all its big flight-feathers so nearly simultaneously that until the new ones grow—a matter of three weeks perhaps—the bird is unable to fly.

When neolithic man therefore wanted feathers for his arrows a visit to the nesting grounds of the Grey-Lag goose—which in those days was probably a commoner species than it is now—would furnish him with a copious supply. While on such a visit he would soon discover the temporary crippled state to which geese are reduced by their moult, and in consequence the ease with which they may then be caught. In this condition they may be herded like so many sheep, as their more northerly breeding relatives are to this day by the Samoyedes of Siberia, who kill them for winter provender.

This is the probable answer to our question *how* the domestication of the Wild Goose came about, and also the reason why it took place in many widely sundered localities.

Although that part of the Eurasian continent where the people dwelt who originated the Aryan language is not precisely known, it is at any rate practically certain that some fraction of it overlapped the breeding range of the Grey-Lag goose. There is therefore

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\* A liking of eggs for food (as for caviare) is an *acquired*, not a natural, taste.

## THE DOMESTIC GOOSE

no territorial argument against these peoples being amongst the earliest domesticators of the goose; though when we consider this bird's vast breeding range they cannot be the only ones. From time immemorial the Tartar and Mongol tribes of Asia have been expert exponents of the bow.\*

The evidence of the Aryan language indicates that those who spoke it passed through a nomadic phase during which time stock-keeping, not agriculture, was their business in life. During this phase the goose was the only bird which they could keep in a state of domesticity with advantage and success. The staple food of the goose—the food on which he can exclusively live and thrive,—comes from that same pasturage which feeds horses, cattle and sheep.

That these nomadic people kept large flocks of geese—like the immense aggregations which later spread over medieval Europe—is improbable. Possible though it was for them to carry in carts or wagons a certain number of tame geese, they would find large quantities a serious handicap to their travelling. In pre-railway days, when huge flocks of geese—a single flock has been estimated at 9000 birds—were driven from time to time along the roads from the eastern counties for sale in London their rate of travel was slow. They took from dawn to dusk to cover eight or ten miles and, even at this rate, many birds fell lame and had to be carried in the cart which followed for that purpose. So short a distance—no more than three hours' travelling at normal speed—would constitute an intolerably short day's journey for nomads even when encumbered with flocks and herds. But once these nomads settled down to the static business of agriculture there would be no limit to the size of their goose-herds except the pasturage available for their grazing.

Apart from the value of the quills for fletching arrows there was in ancient days a further subsidiary use for the tame goose—a use that has not wholly fallen into desuetude today. I refer to this bird's employment by wild-fowlers as a decoy. In winter in southern Spain, when shooting in the Marismas of the Guadalquivir, I have seen wild Grey-Lag geese, than whom there are no birds more wary and vigilant, settle almost alongside a decoy goose which was tethered not twenty yards from a concealed gun. Such an incident would, I believe, happen more often if the concealed gun held his fire long enough to allow the geese to alight—a thing which he rarely has the restraint and curiosity to do.

This utilization of tame geese as decoys brings me to a curiously interesting, but unfortunately not wholly conclusive, piece of evidence that the domestication of the goose took place long ago, when the peoples who inhabited that part of Europe where wild geese nest were still in the neolithic stage of civilization. The evidence I speak of dates, so I understand, from a few years before the building of the Great Pyramid at Gizeh.

The evidence, inconclusive as it is, will be found in an Egyptian wall-painting of three different species of geese in certain significant attitudes (PLATE I). This long narrow

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\* Readers may remember in the Chinese Exhibition at Burlington House, 1935-6, a bronze wine-pot in the shape of a goose (no. 134) which was attributed to the Chou dynasty, and was possibly of the 5th century B.C. or earlier. The out-thrust head and neck of this goose (not unlike the attitude of the foreground goose in PLATE II) is so true to nature that in all probability the artist arrived at it from intimate study of a tame goose rather than from distant and chance observations of wild ones. We have here an indication that the goose was domesticated in China before the date of this bronze. A goose, or a pair of geese, appears to have played an integral part in the ancient Chinese marriage ceremony as a symbol of marital fidelity. Stylized out of all recognition they appear on the willow pattern plate.

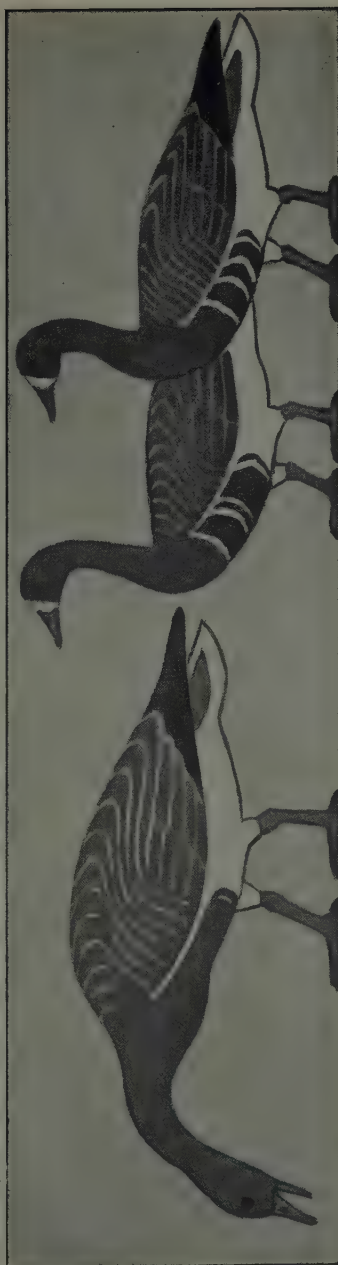
panel, now in the Cairo Museum, was discovered about 70 years ago at Medum, in the tomb of Nefermat, believed to be a high official under king Senefru, the immediate predecessor of that Khufu who built the Great Pyramid. The panel is well-known and justly so. As a work of art it is difficult to overstate its value. Furthermore it is, in point of time, the earliest painting to record the attitudes, colour-pattern and proportions of living birds with so close an approach to truth that their species are instantly recognizable. No other early painting of birds surpasses it in these respects. I would go further and say that in Europe—though not in the Far East—I know no more satisfactory illustration of birds in any early bestiary or later ornithology until, more than 4000 years afterwards, we come at the very beginning of the 19th century A.D. to a select few, but by no means all of the woodcuts in Thomas Bewick's *British Birds*. Professor Alfred Newton in the introduction to his *Dictionary of Birds* (1896) comments upon 'the marvellous fidelity and thorough appreciation of form and colouring—despite a certain conventional treatment' of the geese on this Nefermat panel. The verdict of this famous and scholarly ornithologist few people will gainsay.

To save space, and to secure a reasonable size for the reproduction on one page, I have divided the long panel into two halves: the left half appearing above and the right half below. On the upper part will be seen a pair of White-fronted geese (*A. albifrons*) or, as Professor Newton thought, Lesser White-fronted geese (*A. erythropus*); upon the lower appears a pair of Red-breasted geese (*Branta ruficollis*). Ahead of each of these pairs there are two geese which because of their considerably greater size can hardly be anything but Grey-Lags. The only other possible species would be the Bean-geese (*A. fabalis*) which is almost as big a bird. As there is, in modern times, no record of either Grey-Lag or Bean-geese occurring in Egypt, I would suggest that these larger geese were intended by the artist to portray captive imported birds acting the part of decoys. In the days when this picture was painted Art for Art's sake was unknown. Every picture told a story; it was never the mere decorative filling of a space, however much it may so appear to us now. Let us therefore examine this picture from such a standpoint. The first thing we notice is that the pairs of White-fronted and Red-breasted geese are both portrayed in an alert posture. They have that air of tense and motionless vigilance typical of all wild-fowl when they first alight. The two bigger geese (Grey-Lags?) are on the other hand grazing placidly, and even greedily, as though they had no other care in the world. Looked at in this way the conclusion is almost thrust upon us that the big grazing geese are meant to be decoys and the two alert pairs their dupes. What other reasonable solution is there?

One is tempted to ask yet further questions about this painting. Why was it that Nefermat consented to give up five good feet of wall-space in his tomb in order to record so apparently trivial an incident. That question is answered by the fox's mask and brush in a foxhunter's home, the serried antlers in a Scottish shooting-lodge, the heads and horns on a big-game hunter's walls and the lion, or tiger, or bear-skins on his floors. These things are tangible and referable perpetuations of successful days' sport. Where the modern sportsman arranges to live surrounded by his trophies of the chase, the ancient Egyptian official chose to be buried amid a pictorial record of his life's triumphs. In each instance the inducement, the motive, is the same. For aught we know Nefermat in the intervals of being a high official was also a sportsman. His Wild Goose panel is but one fortunate survivor of many decorations in his tomb which Mariette, in his misplaced and disastrous attempts to remove them from the walls, destroyed without ever a thought of making accurate copies first. Had others survived they might have told us more of Nefermat's character and tastes. As it is we can only guess that he was a



PLATE I



WALL PAINTING OF GESE FROM THE TOMB OF NEFERMAT AT MEDUM  
For description see text, p. 152

PLATE II



GREY LAG GOOSE (foreground); RED-BREADED GOOSE (centre); LESSER WHITE-FRONTED GOOSE (left);  
THE THREE SPECIES (?) REPRESENTED IN THE NEFERMAT WALL-PAINTING  
(From a drawing by the author)

## THE DOMESTIC GOOSE

wildfowler by natural predilection—perchance even an ornithologist born out of due time. It may have been one of his great adventures to capture in a single coup, by means of his tame decoys, both White-fronted and Red-breasted geese—the latter perhaps almost as rare a bird then as now. If this were so, what more likely than his insistence that this unusual and surprising success should be recorded in his tomb? I cannot help thinking that some such motive underlies this otherwise enigmatical painting. That it is mere idle decoration, like the frill on a ham or the valence of a Victorian sofa, nothing will make me believe.

At the present time the White-fronted goose (*A. albifrons*), according to the late Mr M. J. Nicoll (*Handlist of the Birds of Egypt*, 1919) is the commonest species of Grey goose to visit the Nile Delta in winter. Of the occurrence of its 'Lesser' but otherwise very similar cousin *A. erythropus* Mr Nicoll gives only two or three records. On the other hand my old friend, the well-known hunter-naturalist, Mr Abel Chapman, records in his book (*Memories*, 1929), that while on a visit to Lake Menzaleh in the winter of 1927-8 he saw, unfortunately too far off for certain identification, two or three groups of Grey geese that he thought must belong to this species because of their small size. Few competent ornithological observers, other than Mr Chapman, have visited the mid-waters of this vast shallow lagoon; consequently the occurrence there of the Lesser White-fronted goose may be more frequent than is supposed. So far as the Red-breasted goose (*Branta ruficollis*) is concerned Mr Nicoll gives only one modern instance for Egypt—a specimen shot near Alexandria in December 1874. This species also may visit the central waters of Menzaleh more often than is suspected.

The above facts are, of course, no indication that these species of geese were not reasonably common winter visitors to Egypt 5000 or so years ago. In quite recent years the Egyptian goose (*Chenalopex aegyptiacus*) was common in Lower Egypt, whereas today it is the very reverse. Local conditions in the present as in the past are continually affecting the migration ranges of birds. *Anser erythropus* still occurs with considerable frequency in the Aegean and Western Asia during winter. At the same season *B. ruficollis* is common in south Russia and the Caspian basin. A single and hitherto unrecorded occurrence of this bird comes from Cyprus, where in 1928 my brother, Major G. H. Riddell, saw a shot specimen offered for sale in Larnaca market. It is only fair to add that, according to Sir John Bucknill (*Cyprus Hand-book*, 1920), both the Grey-Lag and Bean-goose winter as near Egypt as Cyprus, and I myself encountered the former there in 1927. There is therefore no inherent improbability of all the above species of geese reaching the Nile Delta in ancient times. That at least two species did so—namely the White-fronted (large or small) and the Red-breasted geese—the Nefermat painting proves.

From the tomb of Atet—Nefermat's wife—we have clear evidence that in her day wild-fowling was a popular sport, or more probably a regular and profitable business. A panel from her tomb, now in the Ashmolean Museum, depicts two men catching birds—to all appearance ducks—in some form of clap-net. Such a method of fowling practically demands, for its success, the use of decoys. And when we think that at a later date Egyptian wild-fowlers were sufficiently ingenious to train cats to retrieve the ducks they knocked down with their throwing-sticks, we cannot deny to their fore-runners the intelligence to invent a ruse so simple as the live decoy.

I have dwelt at some length on this Nefermat painting because of its remarkable merit and interest as a work of art and because it is the best evidence we have, though, alas, inconclusive, that the Wild Goose was domesticated early in the 3rd millennium B.C.

Concerning the early domestication of the goose there is one further and practically



conclusive piece of evidence. The British Museum possesses Egyptian drawings of considerably later date than the Nefermat panel, on which are depicted both *White and Pied Geese*. Such variations from the normal colouring could be attained by no other means than domestication extending over a long term of years. Owing to residence abroad and the present War I have had no opportunity to examine these drawings and only know of their existence from their mention in *Birds of our Country* by the two well-known ornithologists Mr Frank Finn and Mr E. Kay Robinson. Although this evidence fails to show that the goose was domesticated as early as neolithic times it suffices to prove that this event took place many centuries before the Gauls sacked Rome in 390 B.C.

Before leaving this part of our subject a word of warning is necessary. The Nefermat panel of the geese as here reproduced (PLATE I) is not a direct copy of the original. It is an enlarged copy that I made from a small half-tone plate in Mr H. G. Spearing's *Childhood of Art* (1930), which small plate was derived from a photograph in the possession of London University. Consequently it should be regarded as no more than a diagram of reference which, however closely it may approximate to the main lines of the original, is probably unreliable in small details such as feather-pattern and the like—these details being blurred or obliterated by the half-tone process. For comparison with this ancient painting I have added (PLATE II) a drawing of the Grey-Lag, Lesser White-fronted, and Red-breasted geese as a modern ornithological draughtsman might see them. To me by no means the least interesting result of such a comparison is the obvious superiority from a decorative and artistic point of view of the ancient painting over the modern one.

Until now I have intentionally omitted all reference to other subsidiary uses to which the live domestic goose was put: these uses being of such comparatively recent date that we need waste little time or space upon them. I have made no mention, for example, of the outstanding value since medieval days or earlier of the smaller or so-called *contour* feathers of the goose, especially those of the breast, for stuffing pillows, cushions or beds. To obtain the necessary supply the geese were partially plucked alive every spring and again during the summer, to such an extent as sometimes to endanger the birds' lives when the ensuing weather turned out colder than expected.

Goose-grease also was a valuable commodity. Because of its slow drying properties the rendered-down fat of the goose was in old days highly esteemed as an emollient. It was then, and for aught I know still is, a basis for many pomades. Almond-oil, more accessible now to dwellers in northern lands, has presumably taken its place, greatly to the goose's advantage; for in order to derive any benefit from goose-grease the bird had first to be killed.

Again in the closing years of the bow's supremacy as a weapon of war, another and even more universal use was found for the Grey-goose quill. Probably long before and certainly as soon as the Arabs brought paper into Europe (the secret of its manufacture came from the Far East to Spain early in the 12th century) the quill pen (*penna* is Latin for feather) came into its own and held the field until quite recent years. The best pens were made out of the primary quills plucked from live geese in the spring—those of the left wing being most appreciated because their curvature bent away from the eyes of right-handed writers. Although the reed pen (*arundo*) continued to be used for all precise and delicate writing on parchment or vellum, the quill pen for ordinary purposes was the exclusive implement for all cursive writing on paper, until, early in the 19th century the metal pen and nib made their appearance. My father, who was born in the reign of William IV, never wrote with anything but a quill until, late in the 'nineties', he took reluctantly to a 'J' nib. And I can remember well my own youthful affection

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for the quill, especially for the writing (all too often) of *poenal* 'lines' at school. No other pen sat so lightly in the hand or slid so smoothly and swiftly over the paper, while the gentle and characteristic twitter of its progress—like the skylark's aerial and continuous song—acted as a gay and consoling accompaniment to the labours of the scribe.

When metal-nib and fountain-pen had brought the makers of quill-pens almost to the verge of bankruptcy a further use was discovered for the goose's quill. It made an admirable toothpick; and in that humble but comforting capacity it has, in my opinion, no rival.

When therefore we think of the various valuable uses to which man throughout the ages has put the domestic goose; when we think that this bird feathered the arrow that killed Saint Edmund and William Rufus; the arrows with which Robin Hood in *Ivanhoe* performed incredible archery; the arrows that saved a British Army from destruction at Agincourt, as surely as the R.A.F. saved England yesterday; and would no doubt have feathered the arrow that won Switzerland her freedom had not William Tell been as much a myth as the goose that laid the Golden Eggs, we are forced to acknowledge that the Grey Goose has played a notable part in both history and romance. When we consider further that from this bird came the pen with which William Shakespeare wrote his plays and the pen of every other writer down to the days of Sir Walter Scott; when we consider that this bird, apart from gracing the board at Michaelmas and Christmas, gives us, at the cost of indigestion and ultimate decease, so blissful a comestible as *paté-de-fois-gras*, and that, at the imminent risk of pneumonia, it has softened the pillow for many a sick and weary head, we cannot deny that the Grey Goose—often at bitter sacrifice to itself—has, more than any other bird contributed to what Mr H. G. Wells, with defiant optimism—or is it despairing irony?—has called the Health, Wealth, and Happiness of Mankind.

# The One-tree Boat at Appleby, Lincolnshire

by HAROLD E. DUDLEY

THE valley of the Ancholme, a few miles east of Scunthorpe, in northwest Lincolnshire, consists of a great stretch of flat, low-lying 'Carrs' between the Oolites of the Lincolnshire Cliff on the west and the Chalk Wolds on the east. The geological evidence suggests that in early times the river Ancholme was a tidal arm of the estuary of the Humber, being much wider than at present. Until the seventeenth century the area was flooded for several months in the year, for it was not until the sixteen-thirties that the first really serious draining operations were commenced, the main feature of this work being the construction of a 'New Cut', or New River Ancholme, which (together with the old river, now little more than a large drain) joins the Humber at Ferriby Sluice.

Evidence as to the former swampy nature of the valley is given by the discovery in 1884 of a sunken timber causeway at the ancient market town of Brigg, where also have been found a large and well-constructed raft and the well-known prehistoric 'dug-out' boat.\* The latter, found in 1886, was removed to the Hull Museum in 1909 and possesses a bibliography that must be almost a record for an object of its kind.

Under such favourable conditions it is hardly surprising that another early boat should now have been found at a distance of only about 4 miles downstream from Brigg. About 250 yards south of the Doncaster to Grimsby Railway, at the eastern border of Appleby parish, a length of black timber had for many years been noticed in the bed of the Old River Ancholme, but appears to have been regarded as a derelict log. It lay at the point where the river and a ditch make a right-angle at the southeast corner of the field that skirts the southern side of the railway (Ordnance Survey 6-inch map, sheets XIX, NE and XI, SE, FIG. 1). Forming part of the western bank of the river, the field is named 'Fish Carr' on the 1849 Appleby Estate map.

On 7 May 1943, during dredging operations, the dredger lifted over 11 feet of flat timber from 2 ins. to 2½ ins. thick, which bore spade-marks, presumably made when cleaning out the river in the days before the introduction of a mechanical dredger. The removal of this obstruction revealed further timber, obviously shaped by man, and during continued operations two more large sections were recovered, together with smaller fragments. As it was plainly evident that they had formed part of a boat hollowed from a single large oak-tree, Mr J. Younie, of the Appleby Estate, communicated with the writer, and after a preliminary inspection the 'find' was removed to the estate sawmill to dry slowly under cover.

When discovered, the stern faced down-stream and was partly buried in grey alluvial clay in the western bank of the river, the body of the boat lying upstream at an acute angle. The bottom was buried in mud in the river bed (FIG. 2).

When assembled at the sawmill it was found that a little over 24½ feet of the boat had been recovered, but its original length is obscure, as the bow end is entirely missing; whether it approached the 47½ feet of the Brigg boat is a matter for conjecture. 4 ft. 6ins.

\* Now, sad to say, lost by enemy action.



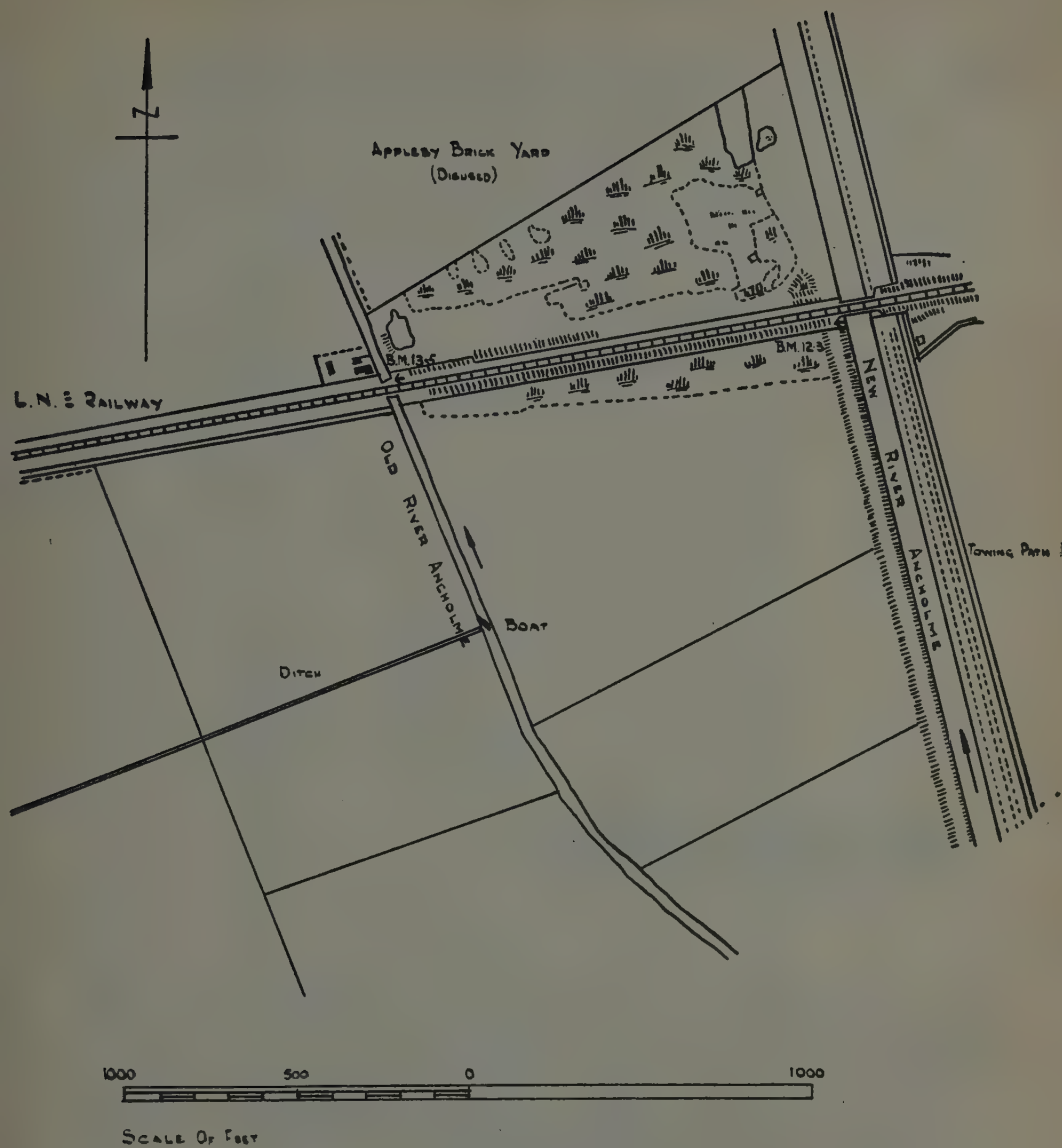


FIG. 1. SHOWING SITE OF BOAT

## ANTIQUITY

from the stern the floor is  $3\frac{1}{2}$  ins. thick, but thins out to 2 ins. thick at 24 feet from the stern. In the Brigg boat the thinnest part of the floor occurs about midway between bows and stern, which suggests that the complete Appleby boat may have been similar in length to the Brigg specimen.

Although so much is absent, the parts recovered possess features of considerable interest. The portion shown in the photograph (PLATE and sketch-plan, FIG. 3) is 13 ft.  $4\frac{1}{2}$  ins. long; a further length of the floor of the boat, measuring 11 ft. 3 ins. long, has also been recovered. This latter was the flat, plank-like section first removed by the dredger. The boat is flat-bottomed, the under surface shelving upwards at the stern.

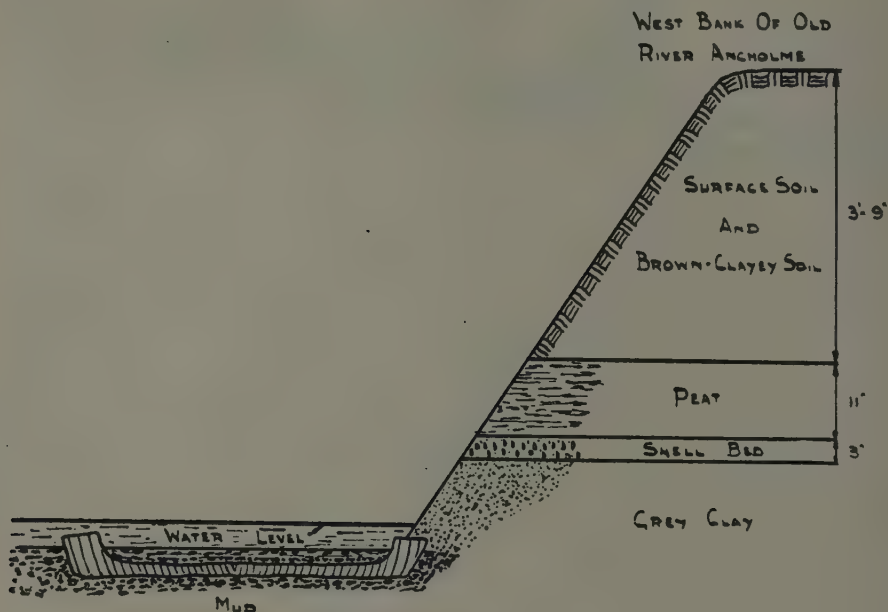


FIG. 2. STERN OF BOAT, FACING DOWN STREAM

The gently-curving sides, which have lost much of their height, become of considerable thickness at the stern to accommodate a slot for a stern-board, where the existing width along the line of the slot is 4 ft. 2 ins., but the original complete width would be greater.

A crack about 18 ft. 6 ins. long, in the floor of the boat, exhibits a workmanlike repair. Many well-bored  $\frac{3}{4}$  in. holes are 'staggered' on each side of the crack at a usual centre of  $3\frac{3}{4}$  ins. In some of these holes short lengths of a twisted fibre rope of two strands have been found, suggesting that the edges of the crack had been laced tightly together. Whether a long wooden patch or cleat formed part of the repair, or whether a simple lacing only was used, has not been established. As it seemed obvious that the whole lacing would give way if the rope broke, unless secured by pegs in at least a proportion of the holes, these were closely sought for during examination, with the result



FIG. 3. SKETCH-PLAN OF PART OF PREHISTORIC BOAT FOUND AT APPEBY, LINCOLNSHIRE, 1943



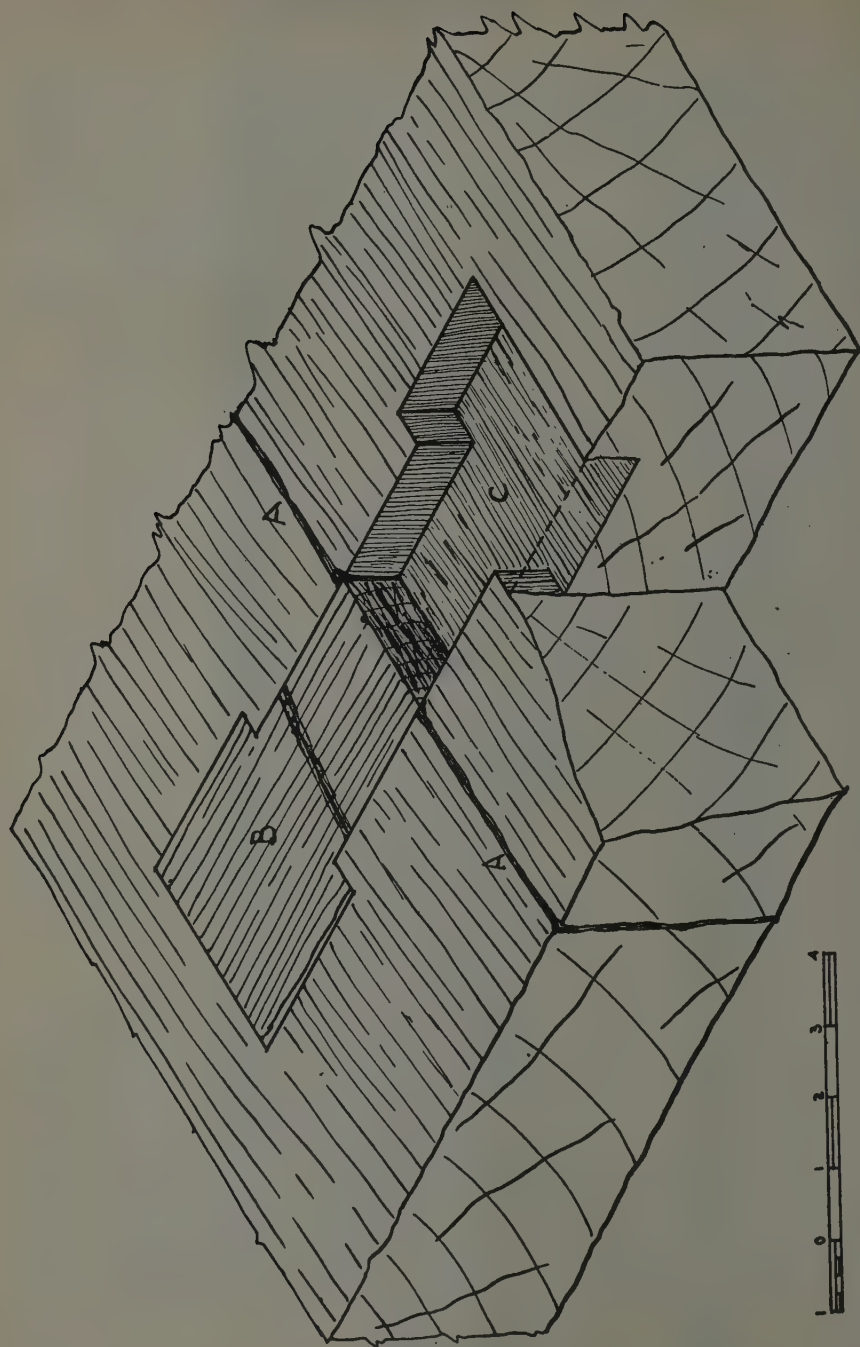
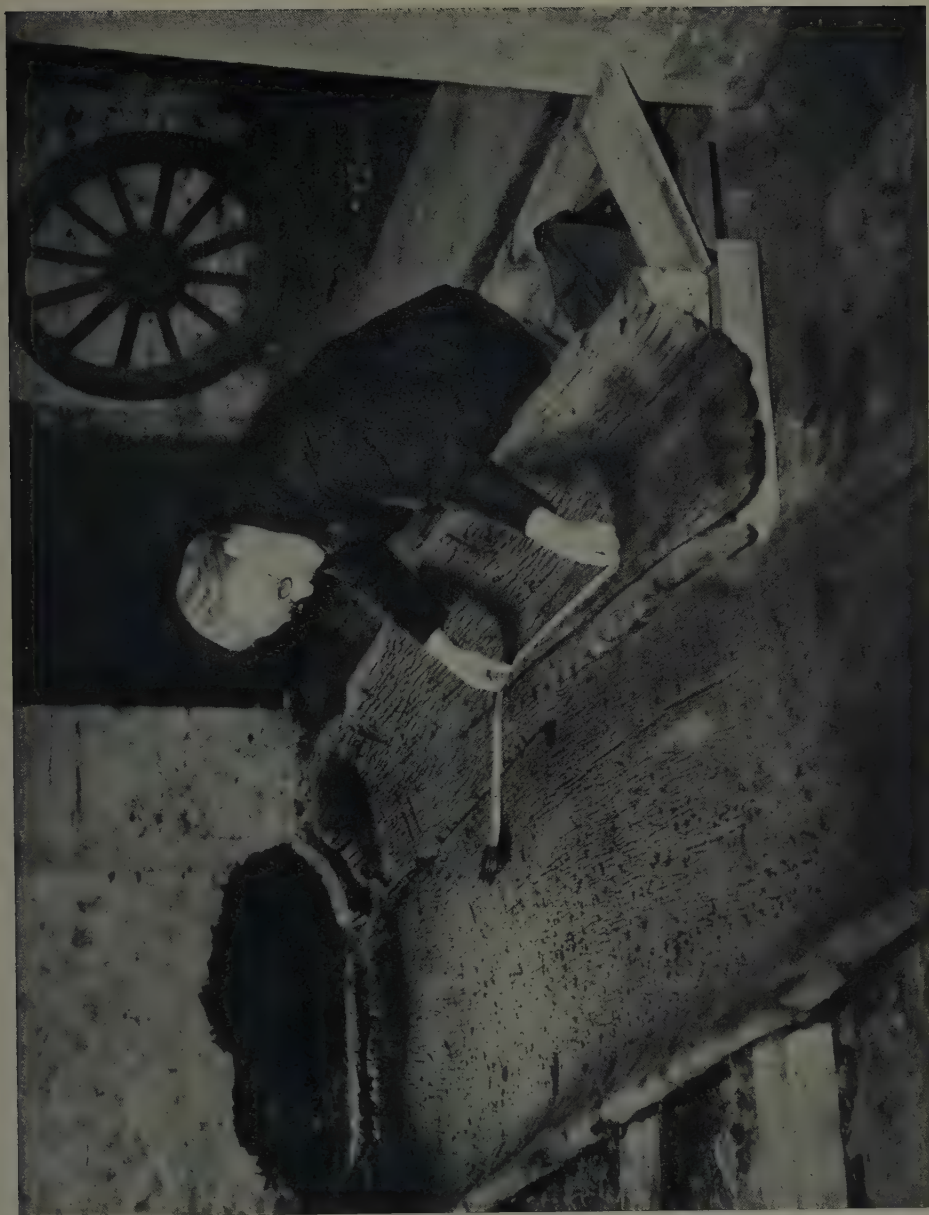


FIG. 4. DIAGRAM OF DOUBLE-HEADED CLEAT TO CLOSE CRACK  
 (a) Crack. (b) Part of cleat recovered. (c) Grooved  $\frac{1}{4}$  in. to receive cleat



'THE APPLEBY (LINGS.) ONE-TREE BOAT, LOOKING TOWARDS THE STERN

By courtesy of 'The Yorkshire Post'





## A ONE-TREE BOAT AT APPLEBY, LINCOLNSHIRE

that in some holes thin wedge-shaped slips of wood were found, the wedge fitting snugly into the groove it had made in the side of the rope when driven home.

Smaller cracks were clamped tightly by flat, double-headed cleats, of oak, recessed into the timber on the inside surface of the boat. The example shown in FIG. 4 measured originally  $9\frac{3}{8}$  ins. long, with a greatest width of 3 ins. and a thickness of  $\frac{3}{4}$  inch. About half this cleat (in two pieces) has been recovered, but has shrunk greatly in drying. Evidence is present of the use of two such cleats.

A group of four holes invites speculation. A few feet from the stern, in the floor of the boat, are two holes about 2 ft.  $4\frac{1}{2}$  ins. apart; each contained a stout, tapered wood plug having a smallest diameter of about  $1\frac{1}{8}$  ins. driven in from below. A little way up each side of the boat, and 4 ins. nearer to the stern, is a  $\frac{7}{8}$ -in. hole bored on the slant. This pair, too, contained wood plugs, more slender than the other pair. It has been suggested that the large plug nearest to the end of the long crack was used to secure the end of the rope lacing, and that the two plugs in the sides may have held a twisted cord stretched from side to side of the boat to take some of the strain from the rope lacing. But that leaves the fourth hole 'in the air'. On the whole I think that the four holes ought to be regarded as a set with a single function, which may have been the fixing of some kind of partition or tie across the boat.

About  $13\frac{1}{2}$  feet from the stern is part of a hole  $1\frac{1}{2}$  ins. diameter, and in the starboard side, nearer the stern, is a somewhat shallow perpendicular groove, but the use of these features is not clear.

The possible age of the Appleby boat is perhaps more difficult to determine than was the case at Brigg, where the boat was found 25 yards from the existing river-bed and where there could be little doubt that the overburden of clay had been formed since the boat was last in use. The Appleby boat, on the contrary, was found in a river bed that may or may not be the original channel of the stream.

Does the workmanship suggest a solution? The use of a stern-board—a rare feature in British 'dug-out' boats—is common to both Brigg and Appleby, and although the methods used in crack-repair show some variation they exhibit a similar germ idea. The boring of over 60 holes (there may have been many more) in such a workmanlike fashion suggests the use of iron tools, and the general design and craftsmanship is hardly 'primitive'. Is it too much to presume an Early Iron Age origin?

Red Deer bones and teeth were found with the boat, and a few yards along the river bank a stone net-sinker was picked up.

At the time of writing the boat is still at the Appleby Sawmill, but will shortly be removed to the Scunthorpe Borough Museum by kind consent of the Hon. G. W. Winn, of Nostell Priory.

I am under a debt of gratitude to Ald. G. R. Walshaw, of Brumby Hall, Scunthorpe, for the considerable assistance he has given during the preparation of this report. I am also grateful to Dr Vernon Wilson, of the Geological Survey, and Mr T. D. Kendrick, of the British Museum, for their advice; to Mr A. M. Cobban, for his sketch-plan of the boat, to Mr S. Wells for the other drawings, and to Mr J. Younie and Mr G. Thornton, of Appleby, for much kindly help in the preservation of the boat.

# Coinage of the Dark Age in Britain

by HAROLD MATTINGLY

IT is perhaps best at the beginning of this paper to clear away an illusion that readily besets us, as we look back on the Dark Age that followed the withdrawal of the Romans from Britain—the illusion that there was something unique in the fate of our island. ‘The barbarians thrust us into the sea, the sea thrusts us back to the barbarians’,—and Aetius, the Roman Patrician, turns a deaf ear. As a matter of fact, Britain only suffered the fate that befell Dacia in the 3rd century, and Gaul, Spain, the Alpine and Balkan districts in the 4th to the 5th. One after another the provinces, once Roman, were overwhelmed under the barbarian tide. The only unique point in the case of Britain is her position as an island—twenty miles interval by sea may well be equated to a much greater distance by land. History, however, sometimes compensates its blows. Britain, the lost island of the West, attracted the fatherly attention of the Popes of Rome earlier than some continental districts nearer home. She began to regain from Pope Gregory the Great what she had lost through Aetius.

The last coins struck by the Romans in Britain were *solidi* and *siliquae* of Magnus Maximus (A.D. 383–388), struck at London—then known as Augusta. For the next coinage in the island—apart from imitations of Roman—we have to wait for the thrymsas and sceattas of the Anglo-Saxons.

The last Roman coins that reached Britain in quantity were those of Theodosius I, and his sons, Arcadius and Honorius. Coins of the British usurper, Constantine III (A.D. 407–411) occur,—but quite rarely. The latest coins of Honorius to be found in Britain are possibly even a little later in date. But in general, it is safe to say that somewhere about 412 there was a break of communications between Britain and the continent. Coins of any Roman Emperor, of West or East, later than Honorius, occur only sporadically in Britain. How complete was the break with the continent will be easier estimated when we have fuller statistics for comparison from Gaul and Spain. Coinage in the West of the Empire was scanty after c. A.D. 400, quite apart from any special failure of Britain to receive it. On many British sites the Roman series is continuous down to Arcadius and Honorius, in others it breaks off earlier—e.g. at Gratian, in the Forts of the Roman Wall (1). If we want to avoid obvious error in judging this evidence we must reflect as well as collect, particularly we must realize the conditions to which it applies.

A province, gradually abandoned as was Britain by the Romans, not at once overrun by barbarians, but left to the mercy of tyrants of its own, must certainly have continued to move in much the same tracks as before. This will be particularly true of the towns and of such institutions as the use of coinage there in trade. Since no fresh supplies were now coming in, existing stocks must have continued in use (2). Not only the precious metals, but even bronze must have acquired a new ‘scarcity’ value. There must have been a

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<sup>1</sup> *J.R.S.* 1922, pp. 74 ff. ‘The Roman Evacuation of Britain’, by R. G. Collingwood.

<sup>2</sup> Whether the stocks of late Theodosian bronze were increased by ‘cast’ imitations is not certain. It might well be so—but evidence is lacking.

strong tendency to draw in all that was left towards the last remaining 'foci' of Roman-British life.

At some date—we cannot say quite when—it must have become profitable to pick over abandoned sites for the metal they might contain. The picture of the distribution of late Roman coinage that we get today has therefore suffered a certain distortion—hard to allow for—owing to continued circulation without the infusion of new supplies. Sites on which coins of Arcadius and Honorius occur in any large numbers will have been occupied long after the Romans left the island (3). Another fact too comes into consideration—what has been called 'coin-drift'—an allowance of time to be made for a coin to travel from its mint to any outlying ring of circulation: in the case of really isolated spots, the allowance might have to be as much as twenty to thirty years. It is not our present task to refight the battle of dates for the abandonment of Britain by the Romans—only to point out that the evidence of coins is not nearly so much opposed to the literary evidence (Bede, etc. 4) as is sometimes maintained. To take just one example—the forts of the Roman wall show no coins later than Gratian, neighbouring places such as Corbridge show coins of Arcadius and Honorius. Certainly the facts indicate that Corbridge was occupied later than the forts—but not much more than that. The latest coins took time to reach the Wall; the Gratians, of which we have heard so much, may have been dropped after A.D. 400.

Something rather more definite in the way of conclusions will be found when we examine the hoards of late Roman silver (5). The coin commonly hoarded is the 'siliqua', as we have learned to call it, though 'half-siliqua' may prove to be the right name. First struck in this form by Constantius II, c. A.D. 355, it was still being issued by Constantine III in A.D. 407–411, and by Honorius at even later dates. Hoards of these 'siliquae' have been noted from various parts of England, and one from Ireland. They seem to be rather specially common in the West, in Somerset and its neighbourhood. For a long time, these hoards were all dated to within a few years of the latest coin contained in each, and there the matter ended. It was certainly strange that they should be common in England in a degree nowhere else paralleled. Britain, it was thought, especially from her mines in the West, must have supplied a considerable part of the Empire's stocks of silver. When Britain was lost, the supplies—and the issue of silver coins—stopped. Clearly, however, this will not do. The coins were minted at such places as Lugdunum, Treveri, Mediolanum, and it makes no sense to say that silver, mined in England, went abroad to be struck and came home to be buried. The true explanation is very different, and the key to it lies in observation of the internal composition of the hoards in relation to one another, especially in the proportions of the later Emperors and later mints. Hoards are at once seen to belong to several distinct classes. They may show nothing as late as Theodosian silver, or may show Theodosian silver in small quantity, or, again may show heavy proportions of late silver of Arcadius and Honorius at Mediolanum. If the earliest hoards that contain Honorius cannot have been buried earlier than c. 400, a long interval must be allowed for other hoards where his latest issues are already outweighing the earlier. Once we have admitted the possibility that these hoards extend beyond the Roman occupation, a new vista opens up.

<sup>3</sup> For a very valuable map and discussion of Theodosian hoards in Britain, see B. H. St. J. O'Neil in *Archaeological Journal*, 1934, pp. 284 ff.

<sup>4</sup> Collingwood, in article quoted above, speaks of Bede as writing only from hearsay. Bede does not make that impression on all readers.

<sup>5</sup> Cp. *Num. Chron.* 1933, pp. 145 ff, 170 ff. 'Terling Hoard', by B. H. St. J. O'Neil and J. W. E. Pearce.



The 'siliquae' are now seen to be the last remains of treasure that could still be hoarded in Britain. They are jealously guarded, and, as time goes on and their scarcity increases, the edges are pared down to the very types: that is the meaning of the clipping, which in some late hoards has been almost universally applied. As much silver must be saved as possible, only let the coin be still recognizably a coin. The denarius of Gildas (6) sounds as if it ought to be a real coin—as such, it can be nothing but a Roman 'siliqua', even as is the late Gallic 'denarius'. Perhaps, when the study of these hoards has been further advanced, it may be possible to separate out and date a series of successive types. It already appears that the latest of them look, not to the historical times of Theodosius I or even Constantine III, but to the legendary days of King Arthur.

So far it has been a question of the survival and continued use of Roman imperial coinage. What comes next is, if not a new and independent coinage, something approximating to it—native imitations in Britain of earlier Roman models. Barbarous imitations of Roman gold and silver are rare. The strange solidus of 5th century types, with legend SCANAMODV, is unique, and even siliquae yield comparatively few imitations. The more numerous and varied are the copies of Roman bronze. Over these, controversy has ranged long and fiercely. One school prefers to date as near as possible to the originals, the other is very ready to venture a long way ahead—even into the Dark Age, after the legions had retired. We can save time and avoid controversy by confining our attention to two groups of barbarous imitations, which are, beyond question, late.

Somewhere towards A.D. 348 Constantius II and Constans issued a great series of coins, commemorating under the common reverse legend, FEL(iciu)m TEMP(oru)m REPARATIO, the restoration of Roman happiness through Roman valour at the 1100th anniversary of the city. One type, showing a Roman warrior thrusting a spear at a horseman fallen beside his horse, outlasted the other types, and continued to be struck—albeit at a module reduced from its original size ('second Brass')—till 361. Imitations of this coin are many, and may have accompanied it from the actual time of its issue. But one class is surely late. It consists of pieces of minute size—as many as fifty may be needed to cover an English halfpenny. The heads on obverse are uncouth, often with a large, glaring eye. The reverse type is usually reduced to a mere fraction of the original—the head and arm or the feet of the warrior, the fallen horseman or his horse. The legends tend to disappear in a few meaningless letters. Such 'minimi' or 'minimissimi', as we have begun to call them, coining a shocking double superlative to match their extreme badness, have been found in numbers at Lydney (7), and Richborough (8), a few at Bourton-on-the-Water (9) while odd specimens probably turn up almost anywhere. At Lydney the 'minimi' were associated with the temple precincts of the god Nodens,—a fact which itself seems to point to a Britain clear of the supervision of the 'most Christian' emperor Theodosius the Great. The extreme scarcity of metal, attested by these minute pieces, cannot be understood either in the Roman period or just outside it. The province must have been starved, and starved for some long time. This coinage, then, of 'minimi', 'diademed' imitations, should belong to a time when the use of the bronze left by the Romans was beginning to be exhausted—perhaps

<sup>6</sup> Gildas, *Epistola* (Mon. Brit. 2, p. 30 B) of priests 'uno sane perditio denario maestos et ad unum inquisitum laetos'. Earlier he writes of them as 'ipsi vel obolom non dantes'.

<sup>7</sup> R. E. M. and T. V. Wheeler, Reports of Research Committee of Society of Antiquaries, 1932.

<sup>8</sup> H. Mattingly and W. P. D. Stebbing. Site-finds from Richborough, *Num. Chron.* 1939, pp. 112 ff.

<sup>9</sup> B. H. St. J. O'Neil, *Num. Chron.* 1935, pp. 284 ff.

## COINAGE OF THE DARK AGE IN BRITAIN

when Britain, nearly at the end of her Roman inheritance and not yet taken over into the new world of the Saxons, was at the very ebb of her vitality.

But there is one class of imitation, later still, though its models are earlier, being in fact the basest billon Antoniniani of the 3rd century, of Gallienus and Claudius II at Rome and of Victorinus and the Tetrici in Gaul. These Antoniniani continued in circulation in the West until as late as the fall of Allectus (A.D. 296), and were certainly imitated from a very early date. It is even claimed that 'minimi' of this class, not much bigger or better than the diademed 'minimi', discussed above, were being struck before A.D. 300 (10). The archaeological evidence, as at present read, seems to point that way, hard as it may be for a numismatist to accept it. It would be so much easier if 'minimi' of all variations would go inside the same chronological department. But there is one hoard, for which a late—a very late—date is absolutely certain. It was found at Richborough in 1931 and was published in *American Notes and Monographs*, no. 80, 1938, by Mr W. P. D. Stebbing and myself. It contained a few regular imperial coins of the 3rd century, a very few of the Theodosian age—for the rest, a mass of barbarous imitations of Roman radiates, mostly of very fair size, with anything like a 'minim' very rare among them. The imitations were of a very remarkable character, often diverging far from any originals that one can indicate and even venturing on the creation of what look like new types. Decisive for date were a handful of coins, combining radiate obverses with reverses of the 4th century—FEL.TEMP.REPARATIO, warrior spearing horseman, and GLORIA ROMANORVM, emperor dragging captive. A combination in one imitation of originals fifty to a hundred years apart is most naturally related to a period far away from either of them. A comparison of select members of this hoard with Anglo-Saxon sceattas completes the proof; there are remarkable affinities, only to be explained by nearness in date.

Britain, then, used as coinage in its Dark Age at least two sets of imitations of Roman coins: (a) 'diademed minimi'—tiny imitations of the FEL.TEMP.REPARATIO type; (b) radiate imitations, mainly of moderate size. It would be natural to interpose radiate 'minims' between the two; but, though such 'minimi' exist, the late date is not yet proved for them. In (a) metal was terribly scarce, and the least scrap had to serve as a coin; in (b) there seems again to be a fair supply of bronze. (a) must precede (b), which is in close touch with Anglo-Saxon sceattas, but it must follow the long period in which imperial bronze continued in use. Why the FEL.TEMP.REPARATIO type was used mainly, though not exclusively, in (a) is not yet clear. Perhaps it may ultimately appear that it was the last coin established in circulation in Britain at the time of the great Pict War under Valentinian I, and that, as far as some districts went, there was no Roman restoration after the War. There, it would be effectively the last Roman coin to be known familiarly, and would lend itself as a natural model for imitation, when the need for something to imitate arose. It would be simple to suppose that, in the Dark Age, men used and imitated Roman coins more or less indiscriminately, as they happened to find them. Were that the case, mixtures of radiate and diademed imitations should be much commoner than they actually are. The Richborough radiate hoard contained no FEL.TEMP.REPARATIO imitations. Why radiate should now return to favour and be so freely copied is hard to say. Perhaps we may apply a theory, first evolved, I think, by Mr C. F. Keary, to explain traces of the radiate coinage in the sceattas. Carausius had taken Saxons in masses into his service, the 'Saxon shore' of his age was not merely

<sup>10</sup> Cp. particularly T. V. Wheeler, *Num. Chron.* 1937, pp. 211. 'Hoard from Theatre at Verulamium'.



'infested', it was actually occupied by Saxons. Hence, the Saxons possessed and understood the Roman coinage of that age, as they never could the succeeding coinages of the next age, when the defences of Britain and the Channel were restored.

Dates are at present only to be used symbolically, but the following scheme will provide a basis for discussion :—

- 1st period, continued use of existing Roman stocks of coin, A.D. 412–c. 460 (but certainly much later for silver).
- 2nd period, age of extreme poverty of metal. Makeshift coinage in bronze—'minimi', imitations of Roman 'diademed' c. 460–550.  
Such 'siliquae' as survive are clipped.
- 3rd period, metal now in better supply. Imitations of Roman 'radiates' c. 550–650.

At some date, perhaps not long after 650, began the Anglo-Saxon coinage of sceattas in silver. The gold thrymsas, preluded by a very few isolated coins of Merovingian type, came a little before the silver. The evidence of the Sutton Hoo hoard of 1939 cannot, owing to the difficulties of war, be called in full. But the absence of any British gold in it probably meant that none was yet in currency in the east of England, and to judge by the evidence of the Merovingian gold, the hoard was not buried before about 650 (11). It thus looks as if the beginnings of Anglo-Saxon coinage fall a little later than used to be supposed.

To sum up results. Britain ceased to be effectively in touch with the Continent after about 412. That certainly did not mean interruption of the normal ways of life in British towns. Roman coins continued in use, as part of the amenities of social life for an indefinitely long period still. While leaving to others the question of the official abandonment of Britain by the Romans, one may observe that coins of 410 were far from having penetrated all over the island by 410. It is quite possible that outlying positions at that date might still show Gratians as their latest coins.

As the old communities began to decay, and the old ways of life with them, makeshift coinages, based on old Roman models, appear. Of two main strains one can be shown, in general, to precede the other. As the second seems to be closely associated with the Saxons, it would be natural to attach the former rather to the remains of the Roman-British population. But evidence is scanty and it is better to wait for something more decisive. Finally, after becoming habituated to the use of the little gold pieces of the Merovings, the tremisses, the Anglo-Saxons proceeded to create a coinage of their own—at first, in gold, later, more conformably to their poverty, in silver. In this new coinage, the strains of imitations, which have so far tended to run in two channels, 'radiate' and 'diademed', now meet in one.

The reader will not let us persuade him that very much is yet known of the Coinage and Currency of the Dark Age in Britain. He will perhaps be willing to admit the claim that the way has been blazed for fresh exploration of what was, until recently, a 'great unknown'.

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<sup>11</sup> This is my own belief, but the date is under dispute. Some good authorities would place it some thirty years earlier. (See ANTIQUITY, 1940, XIV, 64–8. Ed.)



## Reviews

EXCAVATIONS AT DEIR EL BAHRI, 1911-1931. By H. E. WINLOCK. *New York: The Macmillan Company, 1942. pp. x, 235, 14 text-figures, 96 plates and plans on end papers. 30s.*

Mr Winlock's book gives a fascinating account of the excavations which he directed at Deir el Bahri between 1911 and 1931 on behalf of the Metropolitan Museum of Art in New York. It is based on articles written by the author when the finds were still fresh and exciting for immediate publication in the *Bulletin* of the Museum, and it is illustrated with a few useful plans and drawings and a goodly selection from the brilliant photographs by Mr Harry Burton which appeared in the original numbers of the *Bulletin*. A book that will be enjoyed by the general reader quite as much as by the Egyptologist.

The ruins of two great mortuary temples and a chapel of Hathor stand side by side on rising ground at the west end of the 'Asasif valley in which the Museum's concession lay—the southern temple and pyramid built by a king of the 11th dynasty called Nebhepetre, the northern ones by Queen Hatshepsut in the 18th dynasty, the chapel of Hathor by her successor Thutmose III. The principal buildings of all three had been excavated between 1894 and 1903 by the Egypt Exploration Fund but they were preceded by immense forecourts, and the forecourts by causeways stretching far into the plain and in this vast area comparatively little work had been done. There were also many rock-cut tombs round and below the temples still waiting to be studied. The investigations of the expedition were scattered accordingly over a wide field, with the centre of interest continually shifting from temple to courtyard, from courtyard to causeway and from causeway to tomb, and the varied character of the resulting material lends itself to the sort of kaleidoscopic report which Mr Winlock has presented.

Plans reproduced on the end papers of the volume embody the most striking finds in the main area. The original enclosure in front of Nebhepetre's temple was much bigger than anyone suspected and quite different in plan; it approximated in shape a round-topped Egyptian shield, following perhaps the natural shape of the head of the valley; the north enclosure wall ran diagonally across Hatshepsut's complex passing under her pyramid; it embraced therefore more than half her precinct and extended farther east and farther south than either of the later forecourts, the east wall being about 250 yards long. Nebhepetre's temple and pyramid of which little now remains were laid out at the apex of this shield-shaped court but slightly off centre. On either side of the ramp leading to the terrace on which the pyramid stood the expedition found traces of a grove of sycamore-fig trees and tamarisks planted according to a plan drawn on a slab of limestone. The causeway to the east was about 1200 metres long. In Hatshepsut's sanctuary two shallow papyrus pools with flower-beds round them were found on either side in front of the lower ramp in place of the groves in the older temple. A series of ancient bench-marks and foundation deposits showed that here too changes had been made in the original plan.

The most spectacular of the discoveries connected with the temples were those of the 1927-8 season made under mounds east of the precinct where Cook's rest-house had been built. These mounds overlay the burrow pits alongside the northern causeway into which the broken statues of Hatshepsut had been tumbled when Thutmose III

wreaked his vengeance on the dead queen, and they had been enormously increased by the dumps of earlier excavators who had deposited some fifty thousand cubic metres of earth here. To clear the place was a colossal task : it kept a gang of seven hundred men and boys busy moving about eight hundred cubic metres a day for eight weeks. It was a task of a different order to put the pieces together ; they came from about a hundred statues, some fragments weighed more than a ton and had to be moved with a derrick, others were no bigger than one's finger-tip, many of them had been painted and as they had only been exposed to the weather for a few years the colours were extraordinarily fresh. The Cairo and New York museums were enriched and new light was thrown on the original appearance of the temple (seasons 1923-24, 26-27, 27-28, 30-31).

Some of the tombs were under the temple area, others were cut in the cliffs overlooking it, many had been opened before but more cursorily examined, and a mass of new material from this source is scattered through the chapters of the book. Winlock devotes some pages to a batch of papyri which were found tucked away in a hole in the passage leading to one 11th dynasty tomb (season 1921-2, pp. 58-67) ; one of these papyri was a letter written by a *ka*-servant named Hekanakhte to his family when they grumbled about the rations he allowed them in a time of famine—' Half-life ', he writes, ' is better than dying altogether and they say " the hungry must hunger " . Why, they have begun to eat men and women here ! There are none anywhere else to whom such victuals are given ' . In another he cautions his son, ' As to doing any harm to my concubine take warning ! Thou art not associated with me as a partner. If thou wouldst keep quiet, it would be a very good thing ' . Winlock thinks Hekanakhte was a fussy, hectoring old man but if he had known the son and the concubine he might have been more charitable. Two more specimens of the varied fare offered in this book must suffice. In another 11th dynasty grave a gaming board was found of a type which was used also in the 12th dynasty, spread to Palestine and as far east as Susa in the same period and then disappeared for ever. And of even greater cultural interest is the account of some yeast found in the bottom of an 18th dynasty jar : the same strain had been found as a wild organism full of impurities in the prehistoric period before 3400 B.C., and again in a better form about 2000 B.C., but it was only with the beer of 1440 B.C. that the yeast could be called pure ; ' after two thousand years the Egyptian brewer had developed a culture almost comparable to the modern, without the aid of the modern paraphernalia of microscopes and filters ' (season 1929-30, p. 193).

The excavations of the Metropolitan Museum at Deir el Bahri have revolutionized our views about the history of the site and have made many additions to knowledge in other fields. Mr Winlock makes frequent acknowledgments of the help he has received from his own staff and from specialists in various branches to whom he has applied, but he was himself primarily responsible for the planning and execution of the work ; both were admirable. He has had a fine story to tell and it has lost nothing in the telling.

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